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OBSERVATIONS

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ERRATA.

VOL. XXII, for 1862.

Page

87 No. 684, B.A.C. 7244, Mean R.A. *For* 24^h *read* 20^h.

VOL. XXIII, for 1863.

Page

76 3rd col., B.A.C. 7111. *For* 111° 56′ 3″·65 *read* 111° 55′ 3″·59.

81 3rd col., Lalande 45638. *Increase* the seconds of N.P.D. by 10″.

112 No. 914, B.A.C. 7039, Mean N.P.D. *For* 35′ *read* 36′.

112 No. 919, B.A.C. 7111, Mean N.P.D. *For* 111° 56′ 3″·33 *read* 111° 55′ 3″·27.

116 No. 1069, Lalande 45638. *Increase* the seconds of N.P.D. by 10″.

[7] Line 4 from bottom. In the value of $6b \cos B$ *for* $-$xi *read* $+$xi.

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Page

3, 45, and 85. *For* B.A.C. 308 *read* B.A.C. 307 *or* ψ^1 Piscium (1st star).

4 3rd col., 11 Arietis, Dec. 9. *For* 9^s·50 *read* 7^s·50.

4 4th col., 19 Arietis. Diminish the seconds of R.A. by 1^s.

13 1st col. Diminish the minutes of R.A. by 1^m, and place the star before d^1 Cancri.

13 Last col. *For* B.A.C. 3039 (South star) *read* 17 Hydræ.

44 2nd col., ι Ceti. The result for Nov. 29 *should be bracketed;* it is rejected in the mean.

45 4th col. *For* α^1 Ursæ Minoris *read* α^1 Ursæ Minoris S.P.

46 4th col. 1 Arietis *should precede* ϵ Cassiopeiæ.

56 1st col. Piazzi viii. 48 *should precede* Groombridge 1418.

62 1st col. B.A.C. 4019 *should follow* γ Ursæ Majoris.

67 3rd col., B.A.C. 4998. Diminish the minutes of N.P.D. by 1′.

74 2nd col., B.A.C. 6854. *For* 118° 56′ *read* 118° 57′; and *for* 13″·90 and 19″·56 *read respectively* 13″·54 and 20″·04.

76 1st col. B.A.C. 7255 *should follow* 32 Vulpeculæ.

86 No. 96, 11 Arietis, Mean R.A. *For* 6^s50 *read* 7^s50.

86 No. 100, 19 Arietis, Mean R.A. *For* 39^s·49 *read* 38^s49.

93 No. 341, 51 Geminorum, Mean N.P.D. *For* 73° 26′ 48″·75 *read* 73° 36′ 48″·75.

103 No. 686, 58 Virginis, Mean N.P.D. *For* 49″·12 *read* 39″·79.

106 No. 781, B.A.C. 4998, Mean N.P.D. *For* 113° 30′ 38″·59 *read* 113° 29′ 38″·59.

111 No. 953, B.A.C. 6527, Mean N.P.D. *For* 71° 4′ 28″·24 *read* 71° 3′ 28″·42.

112 No. 1009, B.A.C. 6854, Mean N.P.D. *For* 118° 56′ 16″·43 *read* 118° 57′ 16″·80.

124 Note to B.A.C. 4998. *For* greater *read* less.

126 Note to B.A.C. 6854. *For* 17″ less *read* 43″ greater.

131 Vertical Diameters of Venus. *For* June 8 *read* June 9.

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INTRODUCTION

TO THE

ASTRONOMICAL OBSERVATIONS OF

1864.

SECTION I.—*Personal Establishment; Instruments; and Subjects of Observation.*

PERSONAL ESTABLISHMENT.—The Establishment of Assistants of the Observatory during the year 1864 was precisely the same as that which existed in the preceding year. The first assistant was, as before, Mr. Adolphus Quirling, and the second assistant Mr. John Lucas. Mr. William Luff was, as before, computer to the Establishment, and was occupied mainly with the reduction of the observations of zenith-distance made with the Transit Circle. Mr. Lucas took charge, as in the preceding year, of the Photographic Meteorology, as is more particularly mentioned in the Introduction to the Meteorological Observations. The greater part of the reductions of the transit observations made with the Transit Circle was performed by myself, together with those of the Occultations of Stars by the Moon, and of the Measures of Double Stars and Planets made with the Heliometer.

INSTRUMENTS.—The *Carrington Transit Circle* has been used for meridional observations throughout the year, the principal subject of observation being the stars of the British Association Catalogue, as in the preceding year, 1863. A detailed description of this instrument will be given farther on.

The *Transit Instrument.*—This instrument was in use till the end of the year 1861, when it was replaced by the Transit Circle. It was

removed from the west to the east transit room in September 1861. It is kept in good condition, and is available for any purpose for which it may be required, but especially for practice of students of the University. A description of it will be found in vols. I and IV of the *Radcliffe Observations*.

The *Meridian Circle*.—This instrument was also thrown out of use at the end of 1861, and is also available for purposes of instruction. It is fully described in vol. I of the *Radcliffe Observations*.

The other available instruments belonging to the Observatory are, 1st, The *Heliometer*, of which a description will be given farther on; 2nd, a telescope of 10 feet focal length and 7 inches aperture, mounted equatorially on the south front of the Observatory, and used in connexion with a journeyman clock, striking at the termination of each minute; and, 3rd, a 42-inch achromatic telescope, with triple object-glass of 3¾ inches. Observations and discoveries made with the 10-foot telescope in former years by Mr. Pogson have occasionally appeared in the *Astronomische Nachrichten* and in the *Monthly Notices* of the Royal Astronomical Society.

The ancient instruments out of use consist of two brass 8-foot quadrants by Bird, and a 12-foot zenith-sector, in connexion with which may be mentioned an old barometer by Bird. There is also a 10-foot Newtonian telescope by Sir W. Herschel.

The principal clocks belonging to the Observatory are four in number: namely, two with mercurial compensation pendulums, by Dent, used with the transit circle and the heliometer; and two with gridiron pendulums, the first of which, by Shelton, is in the apartment of the meridian circle, and the second, by Hawting, in the east transit room. The three first mentioned are excellent instruments; the last is an old clock, (still useful,) but of an inferior character. There is also a clock with wooden pendulum, which stands in the central hall, and serves to give time for the regulation of ordinary business.

A pocket chronometer by Hardy, adjusted to mean solar time, is used for comparison of clocks and for occasional observations.

The barometer used with the transit circle is by Newman, and has a fiducial point, which is brought into contact with the surface of the mercury; that used formerly with the heliometer is by Jones, and has a bag and float for the adjustment of the level of the cistern. The latter was, in the year 1862, placed in the transit circle room, near that by Newman in actual use.

Description, Adjustments, and Mode of Use of the Transit Circle.—This instrument was purchased of Mr. Carrington and conveyed to

Oxford in the summer of 1861, and in September of that year I prepared to mount it on its original piers in the west transit room of the Observatory, having previously removed the transit instrument for use to the east transit room. On stripping the flooring, as far as was necessary, it was found that very little addition was necessary to the foundations which previously existed. The foundation-piers of the transit instrument to the level of the flooring were adapted to the new instrument by simply building up small square brick columns at the corners; and a very solid brick wall, which was found to run north and south in the plane of the meridian, was admirably adapted, without any alteration, to sustain the piers of the north and south collimators. The dimensions of the two piers of the instrument at the level of the flooring are 5 feet by 2 feet 5 inches; and those of the piers of the collimators are 3 feet by 1 foot 10 inches. The extreme height of each pier of the instrument is 7 feet 9 inches, and the space between them is 2 feet 6 inches. The height of the centre of the telescope from the floor is 5 feet 10 inches. The effective breadth of the room in the direction of the meridian is 19 feet 6 inches, and in the other direction (east and west) it is 14 feet. The distance between the north or south wall and the back of the corresponding collimator-pier is 13 inches. Hence, when the telescope is horizontal, the distance between its object-glass and that of either collimator is barely 3 feet. On account of the small dimensions of the room, I at first intended to place the collimators, under proper protection, outside it, but it was found that this arrangement would be attended with so many inconveniences that I preferred to place them inside the room. The only serious inconvenience is the limitation of the zenithal arc within which stars can be observed by reflexion, but it will be seen by the results that this is sufficient to exercise a very severe check on the zenith points as obtained solely by Bohnenberger's eyepiece.

The instrument, as used by Mr. Carrington, had four reading microscope-micrometers, two of which were placed horizontal and two vertical. This arrangement was, however, inconvenient, because the use of the upper microscope was seriously interfered with by the flame of the central light used for illumination of the field of the telescope and of the divisions of the limb of the circle under the microscopes. As soon, therefore, as the piers were erected, I caused them to be bored for four other microscopes placed at angles of 45°, or at equal spaces between the original ones; and, with the usual liberality of the Radcliffe Trustees, I was allowed to order from Messrs Troughton and Simms four additional ones of precisely the same construction

as the original. In this place it may be proper to state that I took on myself the whole superintendence of the mounting of the instrument; that I adjusted the microscopes and collimators; and made (in 1862 and 1863) the observations for the determination of the flexure of the telescope and of the value of the screw of the declination micrometer. The actual erection of the piers and other similar work was performed under the direction of Mr. T. Grimsley, and the carpenter's work under that of Mr. H. Radbone.

Amongst other subsidiary matters may be mentioned the provision which was made for observation of stars by reflexion. For this purpose two stages with convenient steps were placed one on the north and the other on the south side of the western pier, supporting a connecting horizontal rail running at a convenient height between the telescope and the graduated circle for protection of the observer. The uprights which support this rail are so contrived as to form a protection for the circle from accidental injury, and also an additional guard from the sun's rays during observation. The mercury trough is carried by a frame of a very simple construction (running freely on rollers), consisting of a horizontal board and two vertical boards merely kept firm by braces at the open sides, and with brackets or ledges on their inner surfaces for supporting the mercury trough at any required height. This apparatus has been found very convenient in practice, though it is scarcely sufficiently massive to produce perfect steadiness.

Between the piers is a thick slab of stone sunk to the depth of 9 inches for the support of a second mercury trough kept in a fixed position for the observation of the nadir point in the usual way by Bohnenberger's eyepiece: and this, when the nadir observation is completed, is covered by a massive platform of wood of nearly 2 inches in thickness, which is raised or depressed on hinges, and is, when down, level with the flooring, so that the observing-chair can traverse without interruption. (It has been found, however, that the ordinary mercury trough is not sufficiently steady under this arrangement, and it is proposed to fill up the pit with stone.) The space is too limited to admit of a deep pit, as in the case of the transit circle at Greenwich. For the support of the observer, while observing the nadir point, a tall moveable stage is used, which is sufficiently convenient.

For the illumination of the instrument and of the clock-face gas is employed. For the central illumination of the field of the telescope and the microscopes it has been found convenient to introduce a piece of flexible tubing a little below the support of the gas-holder, which makes the adjustment of the light easy. A metal tube with

large mouth, immediately above the flame, carries off the heated air into the chimney of the room. A fixed gas-jet on the western pier, and on a level with the reflector of the Bohnenberger's eyepiece when the telescope is vertical, serves for the nadir-point observation. The collimators are also illuminated by gas, of which the heating effect is hindered by thick disks of plate-glass. The clock is placed against the north wall of the room, opposite to the western pier.

As the introduction to Mr. Carrington's *Catalogue of Circumpolar Stars* contains a very full and particular description of the instrument as it was used by him, it will be sufficient to refer to that work for minute details, as well as for a drawing made to scale, and to give merely its dimensions and all such circumstances as are connected with its use at this Observatory. The general design was copied from that of the great transit circle at Greenwich, but the proportion of the separate parts is not exactly retained; gun-metal is used instead of iron, and the use of tangent-screws (for coarse motions) is retained. The achromatic object-glass is of 5 inches aperture and of 66 inches focal length, and I am happy to endorse Mr. Carrington's statements of its excellence. The eyepiece (of power about 140) is moveable by a slide in the direction of the meridian, and this slide is carried by a second at right angles, moveable by a coarse screw. As used by Mr. Carrington, a frame, moveable east and west by a micrometer-screw, carried nine transit wires, at equatorial intervals of about 10 seconds and 5 seconds of time, and this was used unaltered during the year 1862. The intervals were, however, found to be inconveniently small, and, at the commencement of 1863, one of the wires having become detached, Mr. William Simms replaced them by a webbing of 13 transit wires, of which those at wide distances had for the equatorial interval about 14 seconds, and the central wires intervals of 3 and 6 seconds. For declination there is no fixed wire, but only one moveable by a distinct micrometer. The screws have the same value, and the angular value of a revolution of each is about 32″. The horizontal axis consists of a central cube of 9 inches in the side, and of two cones, to which the pivots are mechanically joined by bolts, and (excepting the pivots) it was made in a single casting of gun-metal. In the central tube is a reflector which can be differently inclined at pleasure by a rod acted on at the eye-end of the telescope, and the illumination of the field is provided for by a gas flame outside the western pier. The length of the horizontal axis from the centre of one pivot to that of the other is 50 inches. The bearings on which the pivots rest are of the form of the letter Y, of great

solidity, constructed of cast brass, and each capable of similar screw-adjustment in level, while neither admits, when once the bed-plates are screwed down to the pier, of motion in azimuth. The instrument was brought into proper azimuthal position by tapping the eastern bed-plate, the south collimator being used for estimating the amount of the azimuthal deviation obtained by observations of circumpolar stars.

The horizontal axis carries two gun-metal circles (each of which was cast from the same pattern in a single flow, and carefully annealed) of 42 inches diameter. The east circle is used as a clamping and setting circle, being roughly divided to spaces of 5′ on its outer or cylindrical rim. The west circle carries on its western face a band of gold inlet into its surface, on which divisions of 5′ interval were made by Mr. Simms's dividing-engine; the divided rim being bevelled as in the case of the Greenwich Circle, for the purpose of enabling the divisions under the microscopes to be illuminated by one fixed central light. It has been previously mentioned that the number of microscopes originally mounted was four, placed two and two horizontally and vertically, but that four additional, placed between the others at equal intervals, were mounted in June 1862. They are in conical arrangement, the micrometer ends of a diametral pair being 24 inches apart. Each is furnished with two parallel wires in its focus, and, for reading off, the division is placed midway between them. A great portion of the weight of the instrument is taken off the Ys by counterpoises, having the fulcra of their levers near the inner edges of the piers, these piers carrying also friction-rollers applied to grooves in the axis. The residual weight on each bearing has been about 15lbs., the counterpoise weights being placed in the same positions as in the use of the instrument by Mr. Carrington.

The collimating telescopes, mounted on separate piers, as described at page iii, are of 33 inches focal length and 2¾ inches aperture, and the systems of wires in their foci are precisely similar to those used at Greenwich; that is, each webbing consists of two nearly horizontal and two nearly vertical wires crossing each other so as to form a square, and with another nearly horizontal wire at a distance of about ten times the side of the square. The north collimator has a micrometer moving the whole system of wires in the vertical direction, and the south collimator a micrometer moving its system of wires in the horizontal direction.

Subjects of Observation.—The stars observed with the transit circle are taken from a compiled list extracted from the British Association Catalogue, including all below the fifth magnitude which

are visible at Oxford, and which have not been satisfactorily observed either at Greenwich or Oxford. The sun, the moon, and the large planets have been observed within the limits of the observing hours—which extend from six o'clock to midnight during the winter months, and from dusk to 13^h M.T. during the summer months. The observations with the transit circle were made generally by Mr. Quirling and Mr. Lucas on alternate nights till May 13, after which time they were made generally by Mr. Quirling. Their initials, which are given in most of the sections, are Q and L. A few observations have been made by myself, under the initial M.

The *Heliometer*, which will be described in a following section, was, during the year 1864, used almost exclusively by myself, and chiefly for the observation of double stars. The stars chosen for observation were Struve's *Lucidæ*, omitting Classes I and II, for the purpose of detecting the changes in distance and position which may have occurred since the epoch of his observations. Measures were also made of the planets Venus and Mars.

Section II.—*Reduction of the Observations of Right Ascension, made with the Transit Circle in the Year* 1864.

The observations, as before stated, were made generally by Mr. Quirling and Mr. Lucas (Q and L).

The designations of the stars observed follow the same rules as in preceding years. For stars in the Nautical Almanac the names there given are preferred to all others. For stars contained in Baily's Flamsteed, the Greek or Italic letter of Bayer there adopted is used, or, in defect of that, Flamsteed's number, with the name of the constellation. For other stars, the British Association Catalogue is preferred to all other Catalogues, and then, in order of preference, the Catalogues of Groombridge, the Radcliffe, Piazzi, Carrington's Red Hill, Weisse's Bessel, Lalande, and Lacaille (as published by the British Association), Oeltzen's Argelander, and Rümker, are used. In referring to the two volumes of Weisse's Bessel, the contractions W.B. (1) and W.B. (2) are employed; and, similarly for the North and South Zones of Oeltzen's Argelander, the contractions used are O.A. (N.Z.) and O.A. (S.Z.)

Intervals of Wires.—The same wires were used during the year 1864 as in the preceding year, and for the determination of their intervals the transits of a considerable number of circumpolar stars were observed over all the wires in 1863, and the results are given in the following synopsis.

Distance of each of the Seven Wires at wide intervals from the Mean of the Seven.

Determining Stars.	Wire I.	II.	III.	VII.	XI.	XII.	XIII.	Number of Obs.
	s.	s.	s.	s.	s.	s.	s.	
δ Ursæ Minoris...	+43·262	+28·756	+14·445	−0·047	−14·474	−28·836	−43·103	5
Cephei 51 (Hev.)	·247	·729	·436	+ ·041	·450	·886	·117	1
Radcliffe 1979 ...	·314	·710	·462	− ·045	·495	·827	·121	1
Radcliffe 2189 ...	·265	·773	·444	− ·059	·527	·822	·076	1
Radcliffe 2162 ...	·233	·765	·539	− ·080	·479	·901	·076	2
Radcliffe 2218 ...	·242	·717	·373	+ ·004	·458	·849	·029	2
Groombr. 3548...	·246	·745	·452	− ·062	·467	·791	·122	2
Radcliffe 4208 ...	·303	·816	·470	− ·062	·410	·937	·183	1
Radcliffe 2020 ...	·238	·734	·428	− ·017	·463	·836	·088	2
Groombr. 1620...	·208	·677	·493	− ·044	·317	·897	·120	1
Radcliffe 2560 ...	·240	·728	·469	− ·092	·396	·869	·081	1
Radcliffe 6099 ...	·297	·787	·459	− ·060	·465	·868	·152	1
Means	+43·255	+28·746	+14·452	−0·043	−14·458	−28·854	−43·100	20

Distance of each of the Nine Wires at small intervals from the Mean of the Nine.

Determining Stars.	Wire III.	iv.	v.	vi.	VII.	viii.	ix.	x.	XI.	Number of Obs.
	s.	s.	s.	s.	s.	s.	s.	s.	s.	
Cep. 51 (Hev.)	+14·442	+11·558	+8·635	+5·845	−0·009	−5·793	−8·654	−11·560	−14·463	13
δ Urs. Minoris	·448	·551	·650	·858	·023	·797	·653	·560	·473	12
Means	+14·445	+11·555	+8·642	+5·851	−0·016	−5·795	−8·654	−11·560	−14·468	25

By comparison of the wires common to each set in the Tables given above, namely III, VII, and XI, it appears that the position of the mean of the wires in one set differs from the mean in the other set by only $0^{s}\cdot003$. Hence the mean of one set may be considered identical with the mean of the other, and the following distances of each of the thirteen wires from the mean of them all have been definitively assumed.

	s.
I.	+43·255.
II.	+28·746.
III.	+14·450.
iv.	+11·551.
v.	+ 8·642.
vi.	+ 5·851.
VII.	− 0·025.
viii.	− 5·795.
ix.	− 8·654.
x.	−11·560.
XI.	−14·463.
XII.	−28·854.
XIII.	−43·100.

For the observations of the sun and planets, allowance has always been made for the motion in R.A. in the reduction of imperfect transits. For the reduction of imperfect transits of the moon the usual formula has been employed; namely—

$$\text{Correction to mean of wires} = \text{Equat}^{l}.\ \text{Interval} \times \frac{3600 + I}{3600} \times \frac{\text{Sin Geoc. Z.D.}}{\text{Sin App. Z.D.}} \times \text{Sec. Decl}^{n}.$$

Transit Telescope-Micrometer.—It has been stated that the screw of this micrometer gives motion, east and west, to the whole system of the transit wires. In its actual use it is employed for placing the central wire upon the north and south collimator marks, and for measuring the angular space between the position of the line of collimation and the position of the central wire as set for observation, or the *Error of Collimation.*

The value of one revolution of the screw which has been used in 1864 is 32″·03, as in the preceding year.

The *Error of Collimation* was determined by the use of the collimators on every observing evening, the collimators being at each observation set accurately on each other by means of the micrometer-screw of the south collimator, and the readings of their micrometers being recorded. The reading of the telescope micrometer for coincidence with the north and south collimators successively was then taken six times, and the mean of all was taken as the reading for the line of collimation. The difference between this reading and the actual reading of the micrometer as set for observation, when reduced to arc and corrected for the diurnal aberration, is the error of collimation of the central wire.

The difference of estimation of the value of the error of collimation as determined by Mr. Quirling and Mr. Lucas, alluded to in the Introduction to the Observations for 1862 and 1863, was observable also in the year 1864 with very little variation.

The *Error of Level* (determined generally at the same time as the error of collimation) was found by taking the readings of the transit telescope-micrometer for coincidence of the direct and reflected images of the central wire as viewed with a Bohnenberger's eyepiece, and comparing the mean of the readings (six in number) with the mean of the readings for the line of collimation.

Error of Azimuth.—This error is determined by consecutive transits of Polaris or δ Ursæ Minoris, whenever such have been observed; but generally, in defect of this, by transits of two circumpolar stars differing in R.A. by nearly twelve hours, of which a list has been carefully compiled from the *Radcliffe Catalogue.* In a few instances, when two circumpolar stars have not been observed, the azimuthal error is determined by means of one circumpolar and one known south star.

The following is a list of the stars which was prepared for the determination of azimuthal error in 1864, the R.A.'s of the *Radcliffe Catalogue* being accurately brought up to the year 1864 by the use of the precessions and proper motions given in that work.

Assumed Mean Right Ascensions and Approximate N.P.D.'s of Stars used in 1864 *for the Determination of Azimuthal Error.*

Number in the Radcliffe Catalogue.	Name; or Number in Groomb.	Mean R.A. 1864, Jan. 1.	Mean N.P.D. 1864, Jan. 1.	Number in the Radcliffe Catalogue.	Name; or Number in Groomb.	Mean R.A. 1864, Jan. 1.	Mean N.P.D. 1864, Jan. 1.
		h. m. s.	° ′			h. m. s.	° ′
102	67	0 23 10·97	4 26·0	2129	......	8 17 17·46	4 20·0
229	144	0 47 16·16	1 42·4	2162	......	8 27 12·51	5 36·8
270	2 Urs. Min.	0 50 44·40	4 28·5	2189	......	8 36 26·57	5 55·0
559	......	1 55 13·98	1 28·1	2210	......	8 44 47·46	4 59·0
713	......	2 22 28·21	3 32·9	2218	......	8 46 22·49	5 16·9
745	......	2 34 31·08	2 0·5	2273	......	9 4 27·17	2 33·0
870	595	3 0 41·87	5 34·8	2404	......	9 46 18·07	5 25·8
1115	750	3 54 54·29	4 48·5	2407	......	9 51 14·98	2 3·1
1272	......	4 33 18·93	3 54·6	2462	1620	10 9 20·55	5 3·6
1311	......	4 44 0·99	4 13·8	2507	......	10 25 25·43	4 33·0
1377	......	4 58 0·24	4 27·7	2560	......	10 41 55·48	4 55·1
1459	944	5 18 45·16	4 53·0	2594	......	10 55 25·07	1 37·4
1571	1004	5 52 0·90	3 14·3	2612	......	10 57 30·11	3 37·4
1979	......	7 32 27·23	3 14·8	2684	......	11 20 55·88	4 32·7
2020	......	7 40 16·81	3 55·2	2705	......	11 24 41·68	3 38·0
2125	1418	8 15 17·89	4 28·5	2738	......	11 37 11·45	3 42·8

Number in the Radcliffe Catalogue.	Name; or Number in Groomb.	Mean R.A. 1864, Jan. 1.	Mean N.P.D. 1864, Jan. 1.	Number in the Radcliffe Catalogue.	Name; or Number in Groomb.	Mean R.A. 1864, Jan. 1.	Mean N.P.D. 1864, Jan. 1.
		h. m. s.	° ′			h. m. s.	° ′
2792	1850	11 57 51·64	3 39·6	3798	......	17 45 48·79	3 1·8
2836	1871	12 12 51·43	2 48·5	3900	......	18 13 38·38	5 36·3
2905	1923	12 37 21·81	5 36·6	......	24 Urs. Min.	18 21 7·12	3 1·1
2930	1940	12 48 10·16	5 50·9	4208	......	18 58 52·11	3 28·0
3000	2006	13 10 30·92	1 37·3	4476	......	19 42 3·06	4 12·0
3016	2007	13 20 16·16	4 32·1	4894	......	20 29 42·50	5 18·5
3087	2065	13 34 36·64	1 45·1	4980	......	20 38 14·34	2 29·2
3075	......	13 35 2·07	4 1·8	5090	......	20 55 13·69	4 50·6
3157	2099	14 3 56·47	3 35·5	5301	3548	21 26 7·77	3 32·0
3324	2210	14 56 39·55	3 29·4	5723	3820	22 23 38·45	4 34·7
3340	2213	15 5 44·22	5 31·4	5760	......	22 28 51·41	5 38·0
3362	......	15 12 52·93	3 58·3	5776	......	22 29 34·48	2 36·6
3414	2283	15 22 29·71	2 15·0	6099	......	23 24 13·68	4 19·9
3475	......	15 48 39·81	4 43·9	6117	......	23 27 17·07	4 11·5
3523	......	16 4 42·78	4 18·8	6119	4101	23 27 48·20	3 26·5
3522	......	16 5 47·64	5 59·6	6172	......	23 38 23·86	5 17·1
3685	......	17 5 36·54	5 7·1	6253	4193	23 53 12·02	4 3·1
3749	......	17 35 20·55	5 16·7				

The assumed Mean Right Ascensions of Polaris, Cephei 51 (Hev.), δ Ursæ Minoris, and λ Ursæ Minoris, for 1864, Jan. 1, are as follows:

	h.	m.	s.
Polaris	1	9	18·99,
Cephei 51 (Hev.)...	6	35	41·40,
δ Ursæ Minoris ...	18	16	12·82,
λ Ursæ Minoris ...	20	0	7·09.

In the computation of the corrections to apparent R.A. of the circumpolar stars given above, the terms depending upon 2 ☽ have been taken into account. The method of deducing the amount of azimuthal error needs scarcely any explanation. Two tables of factors for the errors of collimation, level, and azimuth have been formed (that is, tabulated values of $\frac{1}{15 \text{ Sin N.P.D.}}$, $\frac{\text{Cos Z.D.}}{15 \text{ Sin N.P.D.}}$, and $\frac{\text{Sin Z.D.}}{15 \text{ Sin N.P.D.}}$), the one for the list of stars above given, and for all stars used in deducing clock error, and the other for small intervals of N.P.D., and thus in any particular case the factor for azimuth can be taken out at sight. In the case, then, of two consecutive observations of Polaris, above and below pole, the times of the observed transits,

(the latter corrected for clock-rate and change of R.A. in 12 hours,) are affected with these factors multiplied into the unknown azimuthal error z. The difference of these times ought to be equal to 12 hours, if the instrument has remained steady during the interval of the observations, and thus the value of z is determined. If three consecutive transits be observed, the process is essentially the same, excepting that the mean of the successive differences of the seconds of transits will give the effect of the error of azimuth, without the need of correction for clock-rate and change of right ascension. Finally, in the case of two circumpolar stars, or of one circumpolar and one south star, each transit affected with z multiplied into its proper factor and compared with the right ascension of the star, will give a clock error; and the two clock errors thus deduced, when corrected for clock-rate in the interval, should be equal; and hence z is found.

The following table gives the values of the errors of collimation, level, and azimuth which have been used throughout the year 1864, with the days of observation annexed:—

Instrumental Errors used in the Reduction of the Transit Observations, 1864.

Day of Obs.	Observer.	Error of Collimation	Error of Level.	Error of Azimuth.	Determining Stars for Error of Azimuth.
1864.		"	"	"	
Jan. 1	L	+0·42	+0·90	+0·73	Radcliffe 713 & Radcliffe 713 S.P.
2	Q	"	"	+4·44	Groombridge 595 & Radcliffe 3362 S.P.
3	L	"	[+0·65]	[+0·73]	No determining stars.
4	L	+0·03	+0·32	+0·73	Radcliffe 559 & Groombridge 2210 S.P.
5	Q	+1·06	+1·41	+4·11	Groombridge 2099 S.P. & Radcliffe 713.
6	L	+0·03	+0·74	+1·67	Radcliffe 713 & Groombridge 2210 S.P.
7	Q	+1·06	+1·50	[+1·67]	No determining stars.
8	L	+0·03	+0·38	+1·06	Radcliffe 559 & Groombridge 2099 S.P.
16	Q	+0·37	−0·16	+0·02	Groombridge 750 & Radcliffe 3523 S.P.
19	Q	+0·24	−0·08	[−0·50]	No determining stars.
21	Q	"	"	−0·95	Groombridge 750 & Radcliffe 3523 S.P.
25	L	+0·49	+0·70	[−0·90]	No determining stars.
26	Q	"	"	[−0·90]	" "
27	L	"	"	[−0·90]	" "
28	Q	"	"	[−0·90]	" "
29	L	"	"	−0·82	Radcliffe 3475 S.P. & Groombridge 750.
30	Q	"	"	−0·48	δ Ursæ Minoris S.P. & Cephei 51 (Hev.)

Day of Obs.	Observer.	Error of Collimation	Error of Level.	Error of Azimuth.	Determining Stars for Error of Azimuth.
1864.		"	"	"	
Feb. 3	L	+ 0·49	+ 0·94	− 0·45	Radcliffe 2020 & λ Ursæ Minoris S.P.
4	Q	"	"	+ 1·68	Radcliffe 3685 S.P. & Groombridge 944.
5	L	"	"	+ 0·01	Groombridge 1418 & Radcliffe 4894 S.P.
6	Q	"	"	[+ 0·01]	No determining stars.
8	L	+ 0·55	+ 0·76	+ 0·93	δ Ursæ Minoris S.P. & Cephei 51 (Hev.)
9	Q	"	"	− 1·62	" "
10	L	"	"	[− 1·62]	No determining stars.
13	Q	"	+ 0·19	+ 1·16	δ Ursæ Minoris S.P. & Cephei 51 (Hev.)
14	L	+ 0·53	+ 0·96	[+ 1·16]	No determining stars.
15	L	"	"	[+ 1·32]	" "
16	Q	"	"	+ 1·32	δ Ursæ Minoris S.P. & Cephei 51 (Hev.)
17	L	"	"	+ 1·18	" "
18	Q	"	"	+ 1·72	" "
19	L	"	"	[+ 1·72]	No determining stars.
23	Q	+ 0·54	+ 1·54	+ 4·08	δ Ursæ Minoris S.P. & Cephei 51 (Hev.)
24	Q	"	+ 0·22	[+ 4·08]	No determining stars.
Mar. 1	Q	"	+ 0·93	+ 2·34	Groombridge 1004 & Radcliffe 3900 S.P.
4	L	"	+ 0·22	+ 0·17	Cephei 51 (Hev.) & Radcliffe 4208 S.P.
10	Q	+ 0·51	+ 1·57	+ 0·85	δ Ursæ Minoris S.P. & Cephei 51 (Hev.)
11	L	"	+ 0·67	+ 0·12	Polaris & Groombridge 3820 S.P.
12	Q	"	"	+ 2·48	Polaris & λ Ursæ Minoris S.P.
15	Q	+ 0·86	+ 0·22	[+ 0·66]	No determining stars.
16	L	"	+ 1·82	+ 0·66	δ Ursæ Minoris S.P. & Cephei 51 (Hev.)
17	Q	"	"	+ 0·38	Polaris & δ Ursæ Minoris S.P.
18	L	"	"	+ 0·10	Cephei 51 (Hev.) & Groomb. 3820 S.P.
19	Q	"	"	− 0·04	Polaris & λ Ursæ Minoris S.P.
20	L	+ 1·12	+ 1·41	[− 0·04]	No determining stars.
23	L	"	+ 1·09	− 2·29	Groomb. 1418 & Groomb. 3548 S.P.
24	Q	"	+ 2·85	+ 1·63	λ Ursæ Minoris S.P. & Radcliffe 2162.
29	Q	+ 0·89	+ 1·58	+ 1·13	λ Ursæ Minoris S.P. & Groomb. 1418.
30	L	"	"	− 0·82	Groombridge 1418 & Radcliffe 5090 S.P.
31	Q	"	"	+ 2·16	No determining stars.
Apr. 1	L	"	"	"	} Three consecutive transits of Polaris.
2	Q	"	"	"	
4	L	+ 1·11	+ 1·50	"	No determining stars.
11	L	+ 0·96	+ 1·41	− 2·94	Groombridge 3548 S.P. & Radcliffe 2507.
12	Q	"	+ 2·56	+ 0·07	} Five consecutive transits of Polaris.
13	L	"	"	− 0·52	
14	Q	"	"	"	

Day of Obs.	Observer.	Error of Collimation	Error of Level.	Error of Azimuth.	Determining Stars for Error of Azimuth.
1864.		"	"	"	
Apr. 15	L	+ 0·96	+ 2·56	− 0·52	No determining stars.
17	L	+ 0·66	[+ 2·00]	− 0·72	
18	L	,,	+ 2·34	,,	
19	Q	,,	,,	,,	Nine consecutive transits of Polaris.
20	L	,,	+ 1·47	− 0·98	
21	Q	,,	,,	,,	
22	L	,,	+ 2·12	− 2·28	
23	Q	+ 1·84	+ 3·49	− 2·50	Groomb. 4101 S.P. & Groomb. 1923.
25	L	+ 0·47	+ 1·76	− 3·68	Groomb. 4101 S.P. & Groomb. 1850.
28	Q	+ 1·70	+ 3·52	[+ 0·38]	No determining stars.
29	L	+ 0·47	+ 1·79	+ 0·38	Radcliffe 2594 & Radcliffe 6099 S.P.
30	Q	+ 1·70	+ 3·55	[+ 0·38]	No determining stars.
May 5	Q	+ 1·55	+ 3·42	[− 0·46]	,, ,,
7	Q	,,	+ 3·23	− 0·46	Groomb. 1871 & Groomb. 67 S.P.
13	L	+ 0·85	+ 2·30	− 2·95	,, ,,
14	Q	+ 0·99	+ 3·14	− 1·12	Polaris S.P. & Groombridge 2099.
17	M	,,	[+ 3·00]	[− 3·43]	No determining stars.
18	Q	,,	+ 3·48	− 3·43	Radcliffe 559 S.P. & Groombridge 2213.
19	Q	,,	,,	[− 3·43]	No determining stars.
20	Q	+ 1·52	+ 3·48	[− 3·43]	,, ,,
21	Q	,,	,,	[− 3·43]	,, ,,
24	Q	+ 1·49	+ 4·00	− 1·15	Groomb. 2099 & Groomb. 595 S.P.
25	Q	,,	,,	+ 1·22	Polaris S.P. & Radcliffe 3075.
26	Q	,,	,,	+ 1·31	Groomb. 2210 & Groomb. 750 S.P.
27	Q	,,	,,	− 1·29	η Boötis & Groombridge 2099.
28	Q	,,	,,	[− 1·29]	No determining stars.
30	Q	+ 1·38	+ 3·61	+ 2·35	Polaris S.P. & Groombridge 2213.
June 1	Q	,,	,,	+ 2·54	Polaris S.P. & Spica.
2	Q	,,	,,	[+ 2·54]	No determining stars.
3	Q	,,	,,	− 0·48	Groomb. 2099 & Groomb. 595 S.P.
4	Q	,,	,,	[− 0·48]	No determining stars.
6	Q	+ 2·07	+ 3·55	+ 2·14	Radcliffe 745 S.P. & Groombridge 2210.
7	Q	,,	,,	+ 0·66	Spica & Groombridge 2210.
8	Q	,,	+ 4·28	+ 1·19	Groombridge 2099 & Radcliffe 1272 S.P.
10	Q	,,	,,	[+ 1·19]	No determining stars.
11	Q	,,	+ 3·65	+ 1·53	Groombridge 750 S.P. & Radcliffe 3685.
13	Q	+ 1·85	+ 4·20	+ 1·96	Groomb. 2210 & Groomb. 750 S.P.
15	Q	,,	,,	+ 2·36	Groombridge 750 S.P. & Radcliffe 3523.
16	Q	,,	,,	+ 1·89	Groombridge 750 S.P. & Radcliffe 3522.

Day of Obs.	Observer.	Error of Collimation	Error of Level.	Error of Azimuth.	Determining Stars for Error of Azimuth.
1864.		"	"	"	
June 18	Q	+ 1·85	+ 4·20	[+ 1·89]	No determining stars.
20	Q	+ 1·43	+ 3·90	[+ 1·77]	,, ,,
21	Q	,,	,,	+ 1·77	Radcliffe 3475 & Groombridge 750 S.P.
23	Q	,,	,,	[+ 1·77]	No determining stars.
27	Q	+ 1·51	+ 4·15	[+ 2·40]	,, ,,
30	Q	,,	,,	[+ 2·40]	,, ,,
July 2	Q	,,	,,	+ 1·90	Radcliffe 1272 S.P. & Radcliffe 3685.
4	Q	+ 1·73	+ 4·22	+ 3·08	,, ,,
5	Q	,,	,,	+ 2·49	,, ,,
6	Q	,,	,,	+ 4·07	δ Ursæ Minoris & Cephei 51 (Hev.) S.P.
7	Q	,,	,,	[+ 4·07]	No determining stars.
8	Q	,,	,,	[+ 4·07]	,, ,,
9	Q	,,	,,	[+ 4·07]	,, ,,
11	Q	+ 1·66	+ 4·27	[+ 2·85]	,, ,,
12	Q	,,	,,	+ 2·85	δ Ursæ Minoris & Cephei 51 (Hev.) S.P.
13	Q	,,	,,	+ 2·65	,, ,,
14	Q	,,	,,	+ 2·19	,, ,,
15	Q	,,	,,	[+ 1·19]	No determining stars.
16	Q	,,	,,	+ 1·19	δ Ursæ Minoris & Cephei 51 (Hev.) S.P.
19	Q	+ 1·76	+ 4·46	+ 2·57	,, ,,
20	Q	,,	,,	+ 0·98	,, ,,
21	Q	,,	,,	+ 2·55	,, ,,
23	Q	,,	,,	+ 2·46	,, ,,
27	Q	,,	+ 4·72	[+ 2·46]	No determining stars.
29	Q	,,	,,	+ 2·46	δ Ursæ Minoris & Cephei 51 (Hev.) S.P.
30	Q	,,	,,	+ 2·93	,, ,,
Aug. 1	Q	+ 1·84	+ 4·55	+ 2·76	,, ,,
3	Q	,,	,,	,,	No determining stars.
4	Q	,,	,,	,,	,, ,,
5	Q	,,	,,	,,	,, ,,
6	Q	,,	,,	+ 3·14	δ Ursæ Minoris & Cephei 51 (Hev.) S.P.
8	Q	+ 1·72	+ 4·56	+ 3·18	,, ,,
9	Q	,,	,,	+ 3·46	,, ,,
10	Q	,,	,,	+ 3·34	,, ,,
11	Q	,,	,,	[+ 3·34]	No determining stars.
12	Q	,,	,,	+ 3·18	Cephei 51 (Hev.) S.P. & Radcliffe 4208.
13	Q	,,	,,	+ 1·88	,, ,,
15	Q	+ 2·25	+ 3·99	[+ 2·81]	No determining stars.
16	Q	,,	,,	+ 2·81	δ Ursæ Minoris & Cephei 51 (Hev.) S.P.

Day of Obs.	Observer.	Error of Collimation	Error of Level.	Error of Azimuth.	Determining Stars for Error of Azimuth.
1864.		"	"	"	
Aug. 17	Q	+ 2·25	+ 3·99	[+ 4·00]	No determining stars.
18	Q	"	+ 5·35	+ 5·12	δ Ursæ Minoris & Cephei 51 (Hev.) S.P.
19	Q	"	"	[+ 1·99]	No determining stars.
20	Q	"	"	+ 1·99	λ Ursæ Minoris & Radcliffe 2218 S.P.
23	Q	+ 2·05	+ 4·39	[+ 4·15]	No determining stars.
24	Q	"	"	+ 4·15	λ Ursæ Minoris & Radcliffe 2189 S.P.
26	Q	"	"	+ 4·24	Radcliffe 2020 S.P. & λ Ursæ Minoris.
27	Q	"	"	[+ 4·24]	No determining stars.
29	L	+ 1·70	+ 4·35	+ 3·53	δ Ursæ Minoris & Cephei 51 (Hev.) S.P.
30	Q	"	+ 3·27	[+ 3·53]	No determining stars.
31	L	"	"	+ 2·00	Three consecutive transits of δ Ursæ Min.
Sept. 1	Q	"	+ 4·12	"	
3	Q	"	"	[+ 2·70]	No determining stars.
5	Q	+ 1·96	+ 3·94	+ 3·48	λ Ursæ Minoris & Radcliffe 2189 S.P.
8	Q	"	"	[+ 3·48]	No determining stars.
9	Q	"	"	[+ 3·48]	" "
10	Q	"	"	[+ 4·76]	" "
12	Q	+ 1·76	+ 3·44	+ 4·76	λ Ursæ Minoris & Radcliffe 2162 S.P.
13	Q	"	"	+ 1·83	" "
14	Q	"	"	+ 0·26	Radcliffe 2612 S.P. & γ Piscium.
16	M	"	"	[+ 0·26]	No determining stars.
17	Q	"	"	[+ 2·30]	" "
19	Q	+ 1·97	+ 3·71	+ 4·46	λ Ursæ Minoris & Groomb. 1418 S.P.
20	Q	"	"	[+ 3·12]	No determining stars.
21	Q	"	"	+ 3·12	Groombridge 3548 & Radcliffe 2404 S.P.
23	Q	"	"	[+ 3·12]	No determining stars.
24	M	+ 1·27	+ 3·49	+ 1·02	Radcliffe 2684 S.P. & Radcliffe 6172.
26	L	— 0·36	+ 2·91	— 0·71	Cephei 51 (Hev.) S.P. & λ Ursæ Minoris.
27	Q	+ 0·56	+ 3·87	+ 1·03	Polaris S.P. & Radcliffe 4980.
28	L	— 0·69	+ 3·01	+ 0·92	Cephei 51 (Hev.) S.P. & Radcliffe 4476.
29	Q	+ 0·59	+ 3·84	+ 3·42	Polaris S.P. & Radcliffe 6099.
30	L	— 0·78	+ 2·53	+ 1·21	Radcliffe 4980 & Radcliffe 2705 S.P.
Oct. 1	Q	+ 0·12	+ 3·49	+ 0·31	Radcliffe 6099 & Radcliffe 2738 S.P.
3	Q	+ 0·67	+ 4·11	+ 6·46	Groombridge 3548 & Radcliffe 2404 S.P.
4	Q	"	"	[+ 6·46]	No determining stars.
5	Q	"	"	+ 5·40	Radcliffe 2507 S.P. & Radcliffe 6099.
6	Q	"	"	[+ 6·00]	No determining stars.
7	Q	"	"	+ 6·73	Groomb. 1620 S.P. & Groomb. 3820.
8	Q	"	"	[+ 6·73]	No determining stars.

Day of Obs.	Observer.	Error of Collimation	Error of Level.	Error of Azimuth.	Determining Stars for Error of Azimuth.
1864.		″	″	″	
Oct. 14	Q	+0·66	+3·59	+7·05	Groomb. 67 & Groomb. 1923 S.P.
15	Q	”	”	[+7·05]	No determining stars.
24	L	+0·18	+2·91	+2·82	Groombridge 3820 & Radcliffe 2594 S.P.
26	L	”	”	[+2·82]	No determining stars.
28	L	−0·27	[+3·01]	+4·86	Groombridge 3548 & Radcliffe 2404 S.P.
31	L	−0·08	+2·53	+2·85	Groombridge 1620 S.P. & Radcliffe 5776.
Nov. 2	L	”	”	[+2·85]	No determining stars.
3	L	−0·45	+2·02	+4·62	Groomb. 3548 & Groomb. 1620 S.P.
4	L	”	”	+4·34	Groombridge 3820 & Radcliffe 2612 S.P.
5	L	−1·00	+1·34	+3·17	Groomb. 1620 S.P. & Groomb. 3820.
7	L	−0·82	+1·43	[+2·75]	No determining stars.
8	L	”	”	+2·33	Groombridge 3820 & Radcliffe 2594 S.P.
10	Q	+0·37	+2·24	+6·91	Radcliffe 6172 & Radcliffe 3075 S.P.
12	Q	[+0·38]	”	[+6·50]	No determining stars.
14	Q	+0·39	+2·12	+6·00	Groombridge 1850 S.P. & Polaris.
16	Q	”	”	+6·81	Groombridge 1871 S.P. & Polaris.
17	Q	”	”	+4·78	β Ceti & Polaris.
18	Q	”	”	+6·69	Groombridge 1923 S.P. & Polaris.
22	Q	−0·06	+1·54	+4·57	Groomb. 1871 S.P. & Groomb. 67.
24	Q	”	”	+4·71	Groombridge 1871 S.P. & Polaris.
25	Q	”	”	[+4·71]	No determining stars.
26	Q	”	”	+8·94	Groomb. 67 & Groomb. 1923 S.P.
28	Q	−0·46	+0·63	+2·45	Radcliffe 713 & Groombridge 2210 S.P.
29	Q	”	”	+5·03	Groomb. 144 & Groomb. 2006 S.P.
30	Q	”	”	[+5·03]	No determining stars.
Dec. 1	L	+0·44	+1·95	+5·62	2 Ursæ Minoris & Radcliffe 3075 S.P.
5	Q	−0·45	+0·98	[+1·52]	No determining stars.
6	Q	”	”	+1·52	Groomb. 1940 S.P. & Polaris.
8	Q	”	”	[+1·52]	No determining stars.
9	Q	”	”	[+1·52]	” ”
12	Q	−0·89	+0·70	+1·55	Polaris & Groombridge 2007 S.P.
13	Q	”	”	[+1·55]	No determining stars.
16	Q	+0·31	[+1·00]	[+1·55]	” ”
20	Q	−0·20	+0·83	[+1·55]	” ”
21	Q	”	”	[+1·55]	” ”

It will be seen from the table above that the steadiness of the transit circle both in level and azimuth has been satisfactory.

Clock-Error.—The assumed mean right ascensions of the stars used

for determining clock-error were, as in former years, derived from a list obligingly furnished to me by the Astronomer Royal, which is identical with that printed at pages xxxvi to xxxviii of the *Greenwich Observations* for 1864, and is fundamentally based on the *Greenwich Seven-Year Catalogue of 2022 Stars for the Epoch* 1860. The equinox to which all objects are referred is therefore identical with the Greenwich equinox for this year; and for convenient reference in a matter fundamentally affecting the right ascensions, it seems desirable to reprint it in this place.

Assumed Mean R.A.'s for 1864, Jan. 1, of Stars used for determining Clock-Error, with the corrections to the N.A. places for Stars contained in that Work.

Name of Star.	Assumed Mean R.A. 1864, Jan. 1.	Corr. to Nautical Almanac.	Name of Star.	Assumed Mean R.A. 1864, Jan. 1.	Corr. to Nautical Almanac.
	h. m. s.	s.		h. m. s.	s.
α Andromedæ ...	0 1 21·78	+0·06	11 Tauri	3 32 39·23	......
γ Pegasi	0 6 14·11	+0·05	δ Eridani	3 36 44·07	......
ι Ceti	0 12 29·83	......	η Tauri	3 39 24·29	+0·06
12 Ceti	0 23 5·88	−0·03	γ^1 Eridani	3 51 41·08	+0·05
ε Andromedæ ...	0 31 22·49	......	ω^1 Tauri	4 1 14·81	......
β Ceti	0 36 45·64	+0·06	o^1 Eridani	4 5 13·65	−0·02
μ Andromedæ ...	0 49 12·82	......	γ Tauri	4 12 3·42	......
ε Piscium	0 55 53·23	−0·02	ε Tauri	4 20 40·68	+0·01
β Andromedæ ...	1 2 7·55	......	Aldebaran	4 28 7·17	0·00
θ Ceti	1 17 13·51	+0·02	μ Eridani	4 38 42·25	......
η Piscium	1 24 12·57	+0·05	ι Aurigæ	4 48 8·44	−0·01
ν Piscium	1 34 21·32	0·00	ε Leporis	4 59 42·24	+0·04
β Arietis	1 47 7·90	+0·01	Rigel	5 8 0·15	+0·02
α Arietis	1 59 30·74	+0·02	β Tauri	5 17 41·82	+0·06
67 Ceti	2 10 12·04	+0·03	δ Orionis	5 25 3·56	−0·03
ξ^2 Ceti	2 20 55·85	0·00	α Leporis	5 26 43·94	−0·04
δ Ceti	2 32 30·84	......	ε Orionis	5 29 18·76	−0·01
γ Ceti	2 36 15·35	+0·04	α Columbæ	5 34 43·51	−0·14
σ Arietis	2 43 59·26	......	κ Orionis	5 41 18·38	......
α Ceti	2 55 10·34	+0·06	α Orionis	5 47 48·57	+0·02
δ Arietis	3 3 51·40	+0·01	1 Geminorum ...	5 55 51·24	......
τ^1 Arietis	3 13 22·78	......	ν Orionis	5 59 48·41	−0·02
o Tauri	3 17 29·86	......	η Geminorum ...	6 6 40·13	......
f Tauri	3 23 22·10	......	μ Geminorum ...	6 14 43·96	+0·01
ε Eridani	3 26 31·46	......	β Canis Majoris...	6 16 42·73	......

Name of Star.	Assumed Mean R.A. 1864, Jan. 1.	Corr. to Nautical Almanac.	Name of Star.	Assumed Mean R.A. 1864, Jan. 1.	Corr. to Nautical Almanac.
	h. m. s.	s.		h. m. s.	s.
γ Geminorum ...	6 29 51·27	−0·03	δ Leonis..........	11 6 52·31	+0·01
Sirius..............	6 39 9·24	−0·17	δ Crateris	11 12 32·59	+0·05
θ Canis Majoris...	6 47 52·28	......	τ Leonis..........	11 20 56·54	......
ε Canis Majoris...	6 53 16·88	0·00	υ Leonis..........	11 29 59·12	−0·03
γ Canis Majoris...	6 57 36·34	−0·02	β Leonis	11 42 7·24	+0·05
51 Geminorum ...	7 5 33·59	......	π Virginis	11 53 54·20	......
δ Geminorum......	7 11 59·93	0·00	ε Corvi	12 3 8·09	+0·04
β Canis Minoris...	7 19 46·44	......	η Virginis	12 12 56·90	+0·04
Castor	7 25 55·10	0·00	δ Corvi	12 22 49·92	......
Procyon...........	7 32 10·92	+0·10	β Corvi	12 27 14·86	+0·14
Pollux	7 36 59·40	+0·02	35 Virginis........	12 40 55·92	......
ξ Argûs	7 43 34·48	......	δ Virginis	12 48 45·25	......
6 Cancri...........	7 55 9·64	−0·09	ε Virginis	12 55 24·39	......
15 Argûs	8 1 45·16	+0·01	θ Virginis	13 2 54·62	+0·02
β Cancri	8 9 8·29	......	Spica	13 18 1·87	+0·03
d^1 Cancri	8 15 34·39	......	ζ Virginis	13 27 45·91	−0·01
η Cancri...........	8 24 50·40	+0·03	m Virginis	13 34 28·58	......
γ Cancri	8 35 24·68	......	τ Boötis...........	13 40 47·97	......
ε Hydræ	8 39 34·31	−0·02	η Boötis...........	13 48 12·56	+0·04
α Cancri...........	8 51 2·77	......	τ Virginis	13 54 43·61	+0·05
κ Cancri...........	9 0 22·71	......	κ Virginis	14 5 38·67	......
83 Cancri	9 11 23·20	+0·10	Arcturus	14 9 27·56	+0·07
α Hydræ	9 20 54·23	+0·03	f Boötis	14 20 7·84	......
ξ Leonis...........	9 24 36·70	......	ρ Boötis...........	14 25 58·13	0·00
ο Leonis...........	9 33 53·37	......	ε Boötis...........	14 39 2·87	+0·08
ε Leonis...........	9 38 7·60	+0·04	$α^2$ Libræ	14 43 21·54	+0·04
μ Leonis	9 45 1·41	......	$ξ^2$ Libræ	14 49 23·53	......
π Leonis	9 53 1·46	0·00	ψ Boötis	14 58 37·13	−0·03
Regulus	10 1 7·59	+0·03	β Libræ...........	15 9 41·48	+0·03
$γ^1$ Leonis	10 12 28·22	0·00	o^2 Libræ...........	15 15 26·88	......
ρ Leonis...........	10 25 38·89	0·00	$ζ^1$ Libræ	15 20 35·46	......
34 Sextantis	10 35 36·03	......	α Coronæ	15 28 55·84	+0·08
l Leonis	10 42 6·37	+0·02	α Serpentis	15 37 34·24	+0·07
d Leonis...........	10 53 32·15	......	ε Serpentis........	15 44 2·30	......
χ Leonis	10 58 0·00	−0·01	γ Serpentis	15 50 10·38	......

Name of Star.	Assumed Mean R. A. 1864, Jan. 1.	Corr. to Nautical Almanac.	Name of Star.	Assumed Mean R. A. 1864, Jan. 1.	Corr. to Nautical Almanac.
	h. m. s.	s.		h. m. s.	s.
β^1 Scorpii	15 57 31·98	+0·04	θ Aquilæ	20 4 17·17	......
δ Ophiuchi	16 7 13·22	+0·05	α^2 Capricorni	20 10 30·36	+0·06
γ Herculis	16 15 55·32	......	β Capricorni	20 13 22·02	......
Antares	16 21 4·36	+0·02	ρ Capricorni	20 21 5·97	+0·14
λ Ophiuchi	16 24 3·36	......	ε Delphini	20 26 42·89	......
ζ Ophiuchi	16 29 40·33	......	α Delphini	20 33 19·28	......
ζ Herculis	16 36 9·61	+0·02	ε Aquarii	20 40 18·65	......
κ Ophiuchi	16 51 13·89	−0·05	32 Vulpeculæ	20 48 45·87	+0·04
ε Herculis	16 55 5·27	......	θ Capricorni	20 58 17·87	......
η Ophiuchi	17 2 34·81	......	ζ Cygni	21 7 8·94	+0·07
α Herculis	17 8 26·84	+0·10	α Equulei	21 9 1·43	......
θ Ophiuchi	17 13 39·56	+0·06	ι Capricorni	21 14 40·18	......
σ Ophiuchi	17 19 46·04	......	β Aquarii	21 24 23·80	+0·03
α Ophiuchi	17 28 37·33	+0·06	ξ Aquarii	21 30 30·55	......
β Ophiuchi	17 36 45·26	......	ε Pegasi	21 37 30·39	+0·03
μ Herculis	17 41 8·23	+0·06	δ Capricorni	21 39 31·80	......
89 Herculis	17 49 56·06	......	16 Pegasi	21 46 52·53	+0·01
72 Ophiuchi	18 0 54·12	......	α Aquarii	21 58 47·82	+0·04
μ Sagittarii	18 5 37·78	+0·06	ι Pegasi	22 0 40·86	......
η Serpentis	18 14 16·36	......	θ Aquarii	22 9 39·27	−0·01
λ Sagittarii	18 19 34·65	......	γ Aquarii	22 14 37·84	......
α Lyræ	18 32 20·04	+0·07	σ Aquarii	22 23 26·82	......
β Lyræ	18 45 3·56	+0·12	η Aquarii	22 28 21·98	+0·01
ε Aquilæ	18 53 26·98	......	ζ Pegasi	22 34 40·75	+0·08
ζ Aquilæ	18 59 9·53	+0·13	μ Pegasi	22 43 26·49	......
ψ Sagittarii	19 7 11·91	......	λ Aquarii	22 45 31·00	......
ω Aquilæ	19 11 25·95	+0·04	Fomalhaut	22 50 7·70	+0·03
δ Aquilæ	19 18 38·41	+0·04	α Pegasi	22 57 59·26	+0·02
α Vulpeculæ	19 23 2·81	......	γ Piscium	23 10 6·89	0·00
μ Aquilæ	19 27 26·71	......	κ Piscium	23 19 57·61	−0·03
h^2 Sagittarii	19 28 25·64	+0·11	ι Piscium	23 32 57·33	−0·03
γ Aquilæ	19 39 47·63	+0·08	δ Sculptoris	23 41 50·16	−0·05
α Aquilæ	19 44 8·83	+0·05	ω Piscium	23 52 19·70	−0·03
β Aquilæ	19 48 37·93	+0·06	2 Ceti	23 56 46·19	......
c Sagittarii	19 54 17·44	......			

The comparison of the Apparent R. A. of each of the stars observed for the determination of clock-error with the time of transit, corrected for the three instrumental errors, gives an error of the clock, and the mean of all the errors observed on any evening is supposed to correspond to the mean of the sidereal times or right ascensions. Then, by comparing similar results on successive days, the rate of the clock, or its loss or gain in twenty-four hours, is determined, and the actual rate used for any group is found in general by comparing the preceding and following groups. In determining the rate, it is necessary to make allowance for personal equation, and this, as determined from simultaneous observations by Mr. Quirling and Mr. Lucas, was found to be $0^s{\cdot}56$ in 1863—that is, it is necessary to subtract $0^s{\cdot}56$ from the "clock-slow" as found by Mr. Lucas to reduce to the "clock-slow" as observed by Mr. Quirling. In the greater portion of the year 1864 a smaller value, namely $0^s{\cdot}46$, has been used. The times at which the clock has been put forward one minute will be readily seen without special notes.

The following table will exhibit the mean clock-errors and rates for the year 1864.

Errors and Rates of the Transit Clock during the Year 1864, *used in the reduction of the Observations.*

Day, 1864.	Observer.	Sidereal Time of Mean of Group.	Clock-slow corresponding to Mean of Group.	Clock's Loss in 24 hours.	Adopted Daily Losing Rate.	Day, 1864.	Observer.	Sidereal Time of Mean of Group.	Clock-slow corresponding to Mean of Group.	Clock's Loss in 24 hours.	Adopted Daily Losing Rate.
		h. m.	s.	s.	s.			h. m.	s.	s.	s.
				+0·81						+0·72	
Jan. 1	L	6 8	+58·71		+0·65	Jan. 29	L	5 15	+69·01		+0·70
				0·51						0·68	
2	Q	2 35	58·58		0·47	30	Q	4 55	69·12		0·56
				0·44						0·34	
3	L	14 45	59·80		0·38	Feb. 3	L	5 32	11·05		0·37
				0·33						0·41	
4	L	2 16	59·96		0·33	4	Q	3 58	10·87		0·39
				0·32						0·37	
5	Q	2 42	59·72		0·26	5	L	7 43	11·86		+0·25
				0·20						+0·03	
6	L	2 5	60·48		0·14	8	L	7 50	11·96		0·00
				0·07						−0·13	
8	L	1 29	60·61		0·22	9	Q	6 12	11·28		−0·10
				0·37						(0·97)	
16	Q	3 21	63·04		0·23	10	L	22 14	11·19		0·00
				0·09						+0·04	
21	Q	3 15	63·49		0·32	13	Q	5 30	10·77		0·00
				0·68							
25	L	8 28	66·35		0·67	13	M	7 28	10·66		
				+0·67						−0·02	
27	L	16 39	+67·92		+0·70	14	L	3 8	+11·31		+0·20

In deducing the values of "clock's loss in 24^h," $0^s{\cdot}56$ has been subtracted from the clock-errors of L, for the effect of personal equation, till March 18; afterwards $0^s{\cdot}46$ has been subtracted.

Day, 1864.	Observer.	Sidereal Time of Mean of Group.	Clock-slow corresponding to Mean of Group.	Clock's Loss in 24 hours.	Adopted Daily Losing Rate.
		h. m.	s.	s.	s.
Feb. 15	L	4 20	+11·71	+0·38	+0·40
16	Q	6 12	11·60	+0·42	0·20
17	L	3 50	12·15	—0·01	+0·05
18	Q	4 50	11·66	0·10	—0·20
23	Q	6 20	9·40	0·44	0·38
Mar. 1	Q	6 14	7·15	0·32	0·23
4	L	7 6	7·34	0·12	0·25
10	Q	5 46	4·58	0·37	0·27
11	L	10 14	4·92	0·19	0·25
12	Q	4 31	4·15	0·28	0·20
15	Q	22 15	4·00	0·04	0·10
16	L	8 38	4·13	0·17	0·10
17	Q	7 35	3·76		0·20
18	Q	0 1	3·61	0·22	0·19
18	L	8 45	4·08		0·18
19	Q	8 20	3·43	0·13	0·11
20	L	9 37	3·79	0·09	0·21
23	L	9 37	2·78	0·34	0·50
24	Q	8 38	+ 1·67	0·68	0·62
29	Q	9 59	— 1·22	0·57	0·53
30	L	10 0	1·24	0·48	0·51
Apr. 1	Q	0 28	2·56	0·54	0·35
1	L	11 7	2·12		0·35
2	Q	9 32	3·02	0·36	0·25
11	L	6 59	3·92	0·15	—0·12
12	Q	10 57	4·48	—0·10	+0·05
13	L	9 45	3·84	+0·21	0·19
14	Q	11 26	4·09	0·20	0·15
17	L	23 30	3·29	0·10	0·08
18	L	12 9	3·26	0·06	0·18
19	Q	10 40	3·43	0·31	0·23
20	L	12 7	2·81	0·15	0·20
21	Q	12 47	— 1·84	1·39	1·48
22	L	13 43	+ 0·14	1·40	1·50
23	Q	12 30	1·15	1·61	1·43
25	L	12 12	4·43	1·42	1·32
28	Q	11 19	7·59	1·22	1·40
29	L	12 34	9·61	1·48	1·30
30	Q	10 58	+10·18	+1·10	+1·25

Day, 1864.	Observer.	Sidereal Time of Mean of Group.	Clock-slow corresponding to Mean of Group.	Clock's Loss in 24 hours.	Adopted Daily Losing Rate.
		h. m.	s.	s.	s.
May 5	Q	13 24	+17·25	+1·39	+1·38
7	Q	12 55	19·99	1·38	1·42
18	Q	13 20	36·81	1·41	1·68
19	Q	13 51	38·54	1·70	1·60
20	Q	15 44	40·18	1·52	1·40
24	Q	14 8	44·89	1·20	1·05
25	Q	13 13	45·69	0·83	0·82
26	Q	15 30	46·57	0·81	0·94
June 3	Q	15 21	55·34	1·07	1·29
6	Q	15 1	59·26	1·31	1·38
7	Q	15 8	60·71	1·45	1·45
8	Q	14 34	62·13	1·45	1·40
10	Q	13 54	64·81	1·36	1·33
11	Q	15 0	66·17	1·30	1·28
21	Q	15 26	79·50	1·25	1·38
23	Q	15 9	22·18	1·35	1·32
27	Q	15 14	27·28	1·28	1·35
30	Q	15 48	31·53	1·41	1·40
July 2	Q	16 15	34·37	1·39	1·36
4	Q	17 44	37·05	1·32	1·39
5	Q	16 41	38·44	1·46	1·44
6	Q	19 39	40·05	1·43	1·52
9	Q	16 22	44·52	1·60	1·65
11	Q	14 28	47·79	1·70	1·68
12	Q	16 26	49·59	1·66	1·72
13	Q	17 24	51·44	1·78	1·77
14	Q	17 13	53·19	1·76	1·78
15	Q	16 24	54·92	1·80	1·90
16	Q	17 25	56·98	1·99	1·92
19	Q	17 46	62·57	1·86	1·90
20	Q	18 15	64·53	1·92	1·77
21	Q	17 45	66·11	1·61	1·66
23	Q	18 15	69·55	1·71	1·66
29	Q	18 22	79·24	1·62	1·70
30	Q	18 56	81·05	1·77	1·73
Aug. 1	Q	18 26	24·44	1·70	1·60
3	Q	16 44	27·34	1·50	1·55
4	Q	16 56	28·94	1·59	1·64
6	Q	18 14	+32·40	+1·68	+1·68

March 15 to 17.* The rate is deduced by comparison of Q with Q:
Between April 20 and 21 the clock seems suddenly to have altered its rate.

Day, 1864.	Observer.	Sidereal Time of Mean of Group.	Clock-slow corresponding to Mean of Group.	Clock's Loss in 24 hours.	Adopted Daily Losing Rate.
		h. m.	s.	s.	s.
Aug. 8	Q	18 15	+35·78	+1·69	+1·65
9	Q	19 37	37·39	1·53	1·50
10	Q	18 54	38·76	1·42	1·48
11	Q	16 14	40·16	1·55	1·50
12	Q	19 25	41·99	1·64	1·73
13	Q	18 23	43·72	1·81	1·82
15	Q	18 16	47·37	1·83	1·75
16	Q	19 48	49·14	1·66	1·57
18	Q	19 39	52·09	1·48	1·46
20	Q	18 28	54·90	1·44	1·38
23	Q	17 43	58·81	1·31	1·32
24	Q	20 32	60·28	1·32	1·32
26	Q	19 56	62·91	1·33	1·35
29	L	20 2	67·62	1·38	1·47
31	L	20 39	70·81	1·57	1·66
Sept. 1	Q	18 45	71·95	1·74	1·54
3	Q	19 33	74·68	1·34	1·43
5	Q	20 5	77·69	1·51	1·52
9	Q	19 3	83·80	1·53	1·60
10	Q	19 14	85·48	1·67	1·60
12	Q	21 25	88·69	1·54	1·60
13	Q	21 53	90·37	1·65	1·67
14	Q	22 36	92·13	1·69	1·66
16	M	19 9	94·82	1·63	1·57
17	Q	20 3	+36·67	+1·50	+1·60
19	Q	20 10	+ 2·06		+0·25
21	Q	20 19	2·43	+0·18	0·25
23	Q	21 5	3·05	0·31	0·48
24	M	21 51	3·39	{0·62 / 0·67}	0·55
24	Q	21 35	3·73		0·55
26	L	21 58	5·15	0·48	0·55
27	Q	20 55	5·27	0·61	0·50
28	L	20 59	6·10	0·37	0·43
29	Q	21 48	6·14	0·48	0·40
30	Q	13 44	+ 6·32	{0·27 / +0·60}	+0·40

Day, 1864.	Observer.	Sidereal Time of Mean of Group.	Clock-slow corresponding to Mean of Group.	Clock's Loss in 24 hours.	Adopted Daily Losing Rate.
		h. m.	s.	s.	s.
Sept. 30	L	22 12	+ 7·21		+0·40
Oct. 1	Q	23 16	7·17	+0·40	0·25
3	Q	21 42	7·26	0·04	0·10
4	Q	21 11	7·39	0·13	0·07
5	Q	23 6	7·43	0·04	0·09
6	Q	20 17	7·55	0·14	0·25
7	Q	21 40	7·92	0·35	0·34
14	Q	22 49	10·32	0·34	0·32
24	L	22 39	13·75	+0·30	0·10
28	L	21 56	13·41	—0·09	0·10
31	L	23 6	14·10	+0·23	0·20
Nov. 3	L	23 19	14·57	+0·16	0·00
4	L	23 28	14·93	—0·10	0·12
5	L	23 1	15·27	+0·35	0·27
7	L	21 18	15·64	0·19	0·35
8	L	23 17	16·19	0·51	0·33
10	Q	23 53	16·03	+0·15	0·00
12	Q	1 40	15·77	—0·13	0·00
14	Q	0 5	16·01	+0·12	0·12
16	Q	23 51	16·24	0·12	0·17
17	Q	0 15	16·46	0·22	0·19
18	Q	23 29	16·61	0·16	0·29
22	Q	0 32	18·28	0·42	0·34
24	Q	23 39	18·72	+0·22	0·10
26	Q	0 43	18·68	—0·02	0·25
28	Q	1 35	19·75	+0·53	0·45
29	Q	1 33	20·13	0·38	0·35
30	Q	3 28	20·47	0·31	0·22
Dec. 1	L	1 55	21·05	0·13	0·24
5	Q	22 23	21·96	0·35	0·30
6	Q	0 10	22·23	+0·25	+0·10
8	Q	2 30	22·16	—0·03	—0·08
12	Q	3 46	21·64	0·13	0·22
13	Q	3 53	21·33	0·31	0·26
16	Q	2 36	20·74	0·20	0·24
20	Q	17 18	+19·51	— 0·27	—0·24

In deducing the value of "clock's-loss in 24^h," $0^s\cdot30$ has been added to the "clock-slow" of M for the effect of personal equation in comparison with Q.

Sept. 17. Before the observations of this day the clock was put forward one minute, and afterwards the pendulum was shortened by ¾ of a division.

By means of the clock-errors for the times corresponding to the means of the groups, given in this table, the errors are very readily applied to the times of transit of all the objects observed, on the sheets wherein the reduction of the observations is performed (without previous reduction to the 0^h sidereal preceding), by application of the proportional part of the assumed rate, and thus the Apparent Right Ascensions of all observed objects are found.

For reduction to Mean R. A. of Stars for Jan. 1, 1864, the Nautical Almanac has been used for all stars contained in that work, by comparison of the Mean and Apparent Right Ascensions for each day required. For stars used for determining clock-error, not contained in the Nautical Almanac, the constants log a, log b, log c, and log d, have been computed for the epoch 1865, and are used in conjunction with the values of log A, log B, log C, and log D, given in the Nautical Almanac, for computation of the correction to Mean or Apparent Right Ascension. For other stars in the British Association Catalogue the values of the constants given in that work are used; and, finally, for all other stars (including those selected from the *Radcliffe Catalogue* for determination of azimuthal error) the constants have been computed for the epoch 1865.

In the cases of the sun, moon, and planets, when only one limb has been observed, a correction for the duration of transit of the semidiameter is needed.

For the sun, the moon, and the planet Mercury, the numbers are taken without alteration from the Nautical Almanac.

For Venus a correction is applied to the duration of transit given in the Nautical Almanac, derived from the observed vertical diameters observed in 1863. Taking the sum of sixteen values of the error from 1863 Feb. 13 to May 7, when Venus was distant, and also of ten values from July 10 to Dec. 17, when she was near the earth, and expressing each error under the form $x + y \times$ tabular diameter, we obtain the two equations—

$$16x + 176{\cdot}60 \times y = -27{\cdot}96,$$
$$\text{and} \quad 10x + 303{\cdot}30 \times y = -33{\cdot}29\,;$$

from which we find

$$x = -0''{\cdot}85, \quad y = -0{\cdot}082.$$

Therefore the error of tabular semidiameter

$$= -0''{\cdot}47 - 0{\cdot}082 \times \text{tabular semidiameter}\,;$$

and error of tabular duration of transit

$$= -0^s{\cdot}03 - 0{\cdot}082 \times \text{tabular time of duration of transit of semidiameter}\,;$$

and the corresponding correction is

$$+\,0^s{\cdot}03 + 0{\cdot}082 \times \text{tabular time of duration of transit of semidiameter.}$$

SECTION III.—*Reduction of the Observations of Zenith Distance made with the Transit Circle.*

In the Introduction to the preceding volume, for 1863, observations are exhibited for the determination of the value of the screw of the declination-micrometer, by which it appeared that the most probable value is $32''\cdot09$, and the use of this value has been continued during the year 1864.

Observations were also given for the determination of the value of the flexure of the telescope, the result of which was the value $+2''\cdot59$; but as the result obtained in the year 1865 was considerably smaller than this, namely $+1''\cdot39$, it has been thought prudent to use very nearly the mean of the values given above, namely $+2''\cdot00$, for the year 1864.

The examination of the divisions of the graduated circle was made early in the year 1863, on Jan. 2 and 3; the eight microscopes of the circle having been read for positions at intervals of 5° round the whole circle. The observations are recorded in the Introduction to the volume for 1862, but it will be proper to give in this place an account of the investigation, and an abstract of the results.

The usual process was used for deducing the error of each diameter under the microscopes; namely, by first subtracting the mean of the sums of all the opposite pairs from the sum of each pair taken separately, and then subtracting the mean of all these differences for each diameter from the separate differences. The remainders are considered to be errors of the sum of readings for each diameter under the microscopes, arising from error of division. As each error recurs eight times, one reading of the circle gives a result of considerable accuracy.

The following table exhibits the results, the argument being the pointer reading for the diameter under the pair of horizontal microscopes (A, C).

Pointer Reading.	Error.	Pointer Reading.	Error.
° °	"	° °	"
0 or 180	−1·00	90 or 270	−0·31
5 „ 185	−0·36	95 „ 275	+0·55
10 „ 190	0·00	100 „ 280	+1·14
15 „ 195	−0·80	105 „ 285	+0·14
20 „ 200	+0·08	110 „ 290	−0·18
25 „ 205	−0·58	115 „ 295	−0·44
30 „ 210	+0·18	120 „ 300	−2·03
35 „ 215	−0·50	125 „ 305	−0·78
40 „ 220	−0·04	130 „ 310	+0·93
45 „ 225	+0·11	135 „ 315	+0·81
50 „ 230	−0·38	140 „ 320	−0·13
55 „ 235	−0·95	145 „ 325	−0·16
60 „ 240	−0·80	150 „ 330	+1·35
65 „ 245	−1·80	155 „ 335	+2·00
70 „ 250	−0·58	160 „ 340	+1·06
75 „ 255	−0·53	165 „ 345	+0·30
80 „ 260	+0·53	170 „ 350	−0·71
85 „ 265	+0·01	175 „ 355	−0·90

As the four new microscopes (placed diagonally on the pier with regard to the original ones) were always used for observation after they were mounted, it will be necessary to deduce from the preceding table the actual corrections to be applied to the mean of their readings. Calling the original microscopes (horizontal and vertical) A, B, C, D, in circular order, beginning with the north horizontal microscope, and the new microscopes, a, b, c, d (a being next to A); then, for any given pointer-reading, the division under a—c will be at a part of the circle having a less reading by 45° than those under A—C, and the divisions under b—d will have a less reading by 135°. The proper correction, then, for any pointer-reading will be, on the mean of the four microscopes, one-fourth of the sum of the errors, (with signs changed), at readings less than the pointer-readings above by 45° and 135° respectively. The following table has thus been formed from that preceding, and exhibits the corrections actually to be applied to the observations.

Pointer Reading.	Correction.	Pointer Reading.	Correction.
° °	"	° °	"
0 or 180	−0·23	90 or 270	−0·23
5 „ 185	+0·13	95 „ 275	+0·13
10 „ 190	+0·28	100 „ 280	+0·28
15 „ 195	−0·14	105 „ 285	−0·14
20 „ 200	−0·05	110 „ 290	−0·05
25 „ 205	−0·12	115 „ 295	−0·12
30 „ 210	+0·06	120 „ 300	+0·06
35 „ 215	+0·05	125 „ 305	+0·05
40 „ 220	+0·22	130 „ 310	+0·22
45 „ 225	+0·33	135 „ 315	+0·33
50 „ 230	−0·05	140 „ 320	−0·05
55 „ 235	−0·29	145 „ 325	−0·29
60 „ 240	+0·17	150 „ 330	+0·17
65 „ 245	+0·03	155 „ 335	+0·03
70 „ 250	+0·26	160 „ 340	+0·26
75 „ 255	+0·46	165 „ 345	+0·46
80 „ 260	+0·32	170 „ 350	+0·32
85 „ 265	−0·22	175 „ 355	−0·22

These corrections were graphically represented by the ordinates of a curve drawn so as to give the most probable values of them, and have been applied scrupulously to all the circle-readings during the year 1864.

I will now proceed with the explanation of the computations for the reduction of the observations of zenith distance.

During the whole of the year the four microscopes placed diagonally on the pier were read for every observation, and the runs were obtained in the course of the observations of each night by reading, for a certain number of objects, both the preceding and the following division of the circle. The corrections for runs have been scrupulously applied.

For stars observed at a small distance from the central wire (generally at one of the side wires) the correction for curvature has been computed by the usual formula and applied to the circle-reading.

A correction is also applied for the want of horizontality of the wire. By means of six readings of the micrometer at wires I and XIII (the first and seventh of the wires at large intervals) made on April 23, 1864, it was found that the excess of reading at the first wire above

that at the thirteenth wire was $0^{r}{\cdot}019$, or $0''{\cdot}61$. Hence, for one interval the correction to be applied to the circle-reading is $0''{\cdot}102$—negatively before the transit, and positively after the transit.

In the case of a planet or the moon, the correction for motion in N.P.D. in the interval has also been applied.

It has been the practice, as at Greenwich, to make several bisections of the moon's limb while passing the vertical wires, and the observation for each bisection has been accurately reduced to the meridian by a formula similar to that used at Greenwich.

The readings of the telescope-micrometer have then been reduced to arc, assuming the value of one revolution to be $32''{\cdot}09$, and the resulting numbers, being added to the corrected circle-readings, form the concluded meridional circle-readings.

For the determination of the zenith-point it has been the practice to observe each night, whenever it is possible, one star north of the zenith and one star south of the zenith by reflexion and direct vision, in addition to the observation of the reflected image of the wire. On account of the constant difference between the nadir-point, as determined by the reflected image of the wire, and the zenith-point, as determined by stars, it has been found necessary to apply to the former a correction $-1''{\cdot}91$, deduced from the observations of the year. A full discussion relative to this discrepancy will be given in the sequel.

The following table gives the values of the runs of microscopes on an arc of $5'$ which have been used throughout the year, together with the observed zenith points actually used, and the limits of their use.

Zenith Points; and Corrections for Runs of the Mean of Microscopes on an Arc of 5′: used in the reduction of the Observations of Zenith Distance in the Year 1864.

Interval of Time.	Observer.	Zenith Point.	Interval of Time.	Amount of Runs.
1864.		° ′ ″	1864.	″
Jan. 1 to Jan. 30	Q	38 25 48·86	Jan. 1 to Jan. 11	—0·32
” ”	L	49·75	16 ” 30	—0·64
Feb. 3 ” Feb. 24	Q	49·03	Feb. 3 ” Feb. 10	—0·17
” ”	L	48·36	11 ” 24	—0·40
Mar. 1 ” Mar. 31	Q	47·83	25 ” Mar. 7	—0·48
” ”	L	48·09	Mar. 8 ” 18	—0·64
Apr. 2 ” Apr. 30	Q	47·21	19 ” Apr. 10	—0·40
” ”	L	48·75	Apr. 11 ” 20	—0·62
May 5 ” May 30	Q	46·43	21 ” May 4	—0·82
” ”	L	47·98	May 5 ” 14	—0·87
June 1 ” June 21	Q	45·80	17 ” 26	—0·62
July 2 ” July 30	Q	45·62	27 ” June 6	—1·07
Aug. 1 ” Aug. 31	Q	45·05	June 7 ” 19	—1·01
Sept. 1 ” Sept. 30	Q	45·57	20 ” July 9	—0·64
Oct. 1 ” Oct. 8	Q	46·47	July 11 ” 14	—0·98
14 and 15	Q	52·22	16 ” 30	—1·05
24 to Nov. 8	L	53·10	Aug. 1 ” Aug. 16	—0·98
Nov. 10 ” 30	Q	52·63	17 ” Sept. 1	—0·41
Dec. 1	L	52·93	Sept. 3 ” 20	—0·67
5 ” Dec. 21	Q	53·02	21 ” 30	—0·36
			Oct. 1 ” Oct. 15	—0·50
			24 ” Nov. 7	—0·28
			Nov. 8 ” 22	—0·44
			24 ” 30	—0·66
			Dec. 1 ” Dec. 23	—0·49

On Oct. 12 the microscope-micrometers were cleaned and altered, so that their readings should be more nearly equal.

A complete statement of the results of the observations for determining zenith points will be found in the following tables.

Seconds of Zenith Points in 1864, as observed generally by Mr. Quirling.

Date.	North Stars.	Nadir.	South Stars.
	"	"	"
Jan. 2	48·32	51·74	50·13
5	......	50·32	......
7	......	51·85	......
9	......	51·51	......
12	......	51·24	......
14	......	51·23	......
16	......	49·71	......
19	......	50·57	......
21	......	50·85	......
23	......	50·24	......
26	......	50·17	......
28	......	50·24	......
30	50·44	50·86	46·29
Means...	49·38	50·81	48·21
Feb. 2	......	50·26	......
4	49·29	50·85	50·22
6	......	50·70	......
9	48·86	51·01	48·33
11	......	50·63	......
13	......	50·10	......
16	48·17	49·83	49·22
18	......	50·53	......
20	......	50·71	......
23	51·09	50·16	48·84
25	......	50·75	......
27	......	50·55	......
Means...	49·35	50·51	49·15
Mar. 1	46·63	48·09	47·54
3	......	48·87	......
5	......	49·68	......
8	......	50·83	......
10	......	49·64	......
12	50·16	49·66	47·13
15	......	50·01	......
16	......	50·14	......
Mar. 17	48·02	50·77	45·21
19	48·47	49·89	49·77
22	......	51·49	......
24	45·01	51·05	47·28
29	47·99	51·88	48·13
31	......	50·68	......
Means...	47·71	50·19	47·51
Apr. 2	......	49·82	......
5	......	49·82	......
7	......	50·47	......
9	......	47·14	......
12	(42·26)	49·18	44·43
14	46·54	48·98	......
16	......	50·25	......
19	48·74	50·20	46·02
21	46·79	50·50	44·81
23	48·99	49·74	46·01
26	......	49·49	......
28	......	49·58	......
30	......	52·26	......
Means...	47·77	49·80	45·32
May 3	......	51·72	......
5	......	50·51	......
7	44·46	48·97	44·66
10	......	49·04	......
12	......	48·18	......
14	45·64	47·65	46·52
18	47·03	47·46	44·92
19	......	47·60	......
20	......	48·37	......
21	......	48·89	......
23	......	48·84	......
24	48·66	49·12	48·66
25	......	47·47	......

Date.	North Stars.	Nadir.	South Stars.
	"	"	"
May 26	......	48·70	......
27	45·97	47·71	44·32
Means...	46·35	48·31	45·82
June 1	......	(51·33)	......
3	48·56	47·81	44·55
4	......	47·45	......
6	45·60	46·97	44·97
7	47·83	47·04	46·10
8	44·93	46·14	44·44
10	......	46·88	......
11	45·93	47·71	46·49
13	(42·66)	47·06	45·78
15	45·53	48·59	45·75
16	......	47·72	......
18	......	47·56	......
20	......	48·46	......
21	......	48·38	......
22	......	48·28	......
23	......	48·13	......
27	......	48·56	......
30	......	47·18	......
Means...	46·31	47·64	45·44
July	......	......	......
(17 Nadir-	......	......	......
Point Obs.)	......	......	......
Mean ...	......	45·62	......
Aug. 1	......	47·72	......
3	......	47·44	......
4	......	47·00	......
6	45·70	46·35	43·66
8	......	46·56	......
9	......	48·33	......
10	......	48·49	......
12	45·97	47·18	44·49
13	44·96	45·50	43·61
15	......	45·84	......

Date.	North Stars.	Nadir.	South Stars.
	"	"	"
Aug. 16	......	46·19	......
18	......	46·85	......
20	......	46·24	......
23	......	47·39	......
26	44·09	47·04	45·09
27	......	46·62	......
29	46·06	47·05	46·10
30	......	46·74	......
31	48·26	46·70	43·15
Means...	45·84	46·91	44·35
Sept. 1	......	46·88	......
3	......	47·20	......
5	44·75	47·56	46·85
8	......	(42·31)	......
10	......	46·66	......
13	45·18	47·07	44·24
15	......	46·99	......
17	......	47·55	......
19	46·54	46·52	45·35
21	......	(51·53)	......
23	......	46·62	......
24	......	45·79	......
26*	47·52	47·38	45·85
27	46·30	46·19	46·69
28*	45·94	46·13	47·42
29	44·72	46·19	44·02
30*	46·92	(30·91)	46·55
Means...	45·98	46·77	45·87
Oct. 1	......	47·01	......
3	......	47·63	......
4	......	48·29	......
5	45·77	47·49	47·46
6	......	48·17	......
7	47·37	47·33	46·72
Means...	46·57	47·90	47·09

* These observations were made by L.

Date.	North Stars.	Nadir.	South Stars.
	"	"	"
Oct. 13	......	53·72	......
14	......	53·97	......
15	......	54·70	......
Mean ...	......	54·13	......
Nov. 10	54·53	54·58	53·15
14	52·40	54·48	......
14	52·12	......	......
16	50·46	54·28	......
16	52·95	......	......
18	(56·75)	53·75	......
22	......	53·46	......
24	......	55·23	52·62
26	53·26	53·99	52·00
28	......	54·19	53·98
29	......	54·39	......
Means ...	52·62	54·26	52·94

Date.	North Stars.	Nadir.	South Stars.
	"	"	"
Dec. 1*	53·12	55·06	51·86
5	......	54·53	......
6	52·56	54·35	51·80
8	......	54·41	......
9	......	55·56	......
12	53·20	55·86	53·43
13	......	55·43	......
17	......	55·14	......
21	......	55·22	......
22	......	55·37	......
23	......	56·16	......
Means ...	52·96	55·19	52·36

* This observation was made by L.

Seconds of Zenith Points in 1864, *as observed by Mr. Lucas.*

Date.	North Stars.	Nadir.	South Stars.
	"	"	"
Jan. 1	......	50·99	......
4	......	51·29	......
6	48·76	51·78	50·09
8	48·63	54·02	51·55
11	......	51·25	......
13	......	52·55	......
15	......	50·31	......
18	......	51·46	......
20	......	50·27	......
22	......	52·70	......
25	......	50·26	......
27	......	47·06	......
29	48·95	51·53	49·37
Means ...	48·78	51·19	50·34

Date.	North Stars.	Nadir.	South Stars.
	"	"	"
Feb. 1	......	47·24	......
3	......	50·03	......
5	......	51·30	......
8	......	51·04	......
10	......	50·07	......
12	......	46·59	......
15	......	49·53	......
17	48·03	50·17	49·18
Means ...	48·03	49·50	49·18
Mar. 2	......	48·55	......
4	46·29	48·75	46·66
7	......	46·36	......
9	......	47·55	......

Date.	North Stars.	Nadir.	South Stars.
	"	"	"
Mar. 11	......	50·16	......
14	......	49·60	......
18	48·84	49·06	49·75
21	......	50·52	......
23	48·91	48·97	48·66
26	......	50·23	......
30	49·73	50·77	46·72
Means...	48·44	49·14	47·95
Apr. 1	......	49·87	......
4	......	50·73	......
6	......	50·28	......
8	......	49·62	......
10	......	48·91	......
11	......	48·10	......
13	49·67	49·82	48·21
15	......	49·06	......
18	48·15	50·33	49·35
20	48·01	51·34	52·16
22	......	49·50	47·15
25	48·74	50·52	50·50
27	......	51·15	......
29	47·61	49·80	47·49
Means...	48·44	49·93	49·14
May 2	......	49·53	......
4	......	49·77	......
6	......	49·04	......
9	......	49·77	......
11	......	50·48	......
13	46·77	48·46	48·63
Means...	46·77	49·51	48·63
Oct. 24	52·53	54·40	51·80
28	54·76	......	53·97
29	......	51·30	......
31	53·30	53·71	54·12
Nov. 3	53·69	54·39	54·21
4	52·47	55·16	49·89
5	52·90	55·19	(57·35)
7	......	54·33	......
8	54·28	55·06	53·62
Means...	53·42	54·19	52·94

The following table gives a synopsis of the results previously detailed.

Group.	Limits of Time.	Observer.	Seconds by North Stars.	Seconds by South Stars.	Means.	Nadir Seconds.	Excess of Nadir Seconds.
			″	″	″	″	″
1	Jan. 1 to Jan. 30.	Q	49·38	48·21	48·80	50·81	+2·01
		L	48·78	50·34	49·56	51·19	+1·63
2	Feb. 1 to Feb. 29.	Q	49·35	49·15	49·25	50·51	+1·26
3	Mar. 1 to Mar. 31.	Q	47·71	47·51	47·61	50·19	+2·58
		L	48·44	47·95	48·20	49·14	+0·94
4	Apr. 1 to Apr. 30.	Q	47·77	45·32	46·55	49·80	(+3·25)
		L	48·44	49·14	48·79	49·93	+1·14
5	May 2 to May 30.	Q	46·35	45·82	46·09	48·31	+2·22
6	June 1 to June 30.	Q	46·31	45·44	45·88	47·64	+1·76
7	Aug. 1 to Aug. 31.	Q	45·84	44·35	45·10	46·91	+1·81
8	Sept. 1 to Sept. 30.	Q	45·98	45·87	45·93	46·77	+0·84
9	Oct. 1 to Oct. 7.	Q	46·57	47·09	46·83	47·90	+1·07
10	Oct. 24 to Nov. 8.	L	53·42	52·94	53·18	54·19	+1·01
11	Nov. 10 to Nov. 29.	Q	52·62	52·94	52·78	54·26	+1·48
12	Dec. 1 to Dec. 23.	Q	52·96	52·36	52·66	55·19	+2·53
						Mean =	+ 1·59

The zenith points having been subtracted from the concluded circle readings, the apparent south zenith distances of all the objects observed are obtained, and these are converted into true distances from the astronomical zenith by the application of the refractions. The latter are calculated from Bessel's tables as given in the Appendix to the *Greenwich Observations* for 1853, but diminished in the proportion of 1 : 0·9967, in order to make the results identical with those of the tables in Bessel's *Fundamenta Astronomiæ*, as these were found to be more consistent with the Radcliffe Observations than those of the *Tabulæ Regiomontanæ*. (See *Radcliffe Observations*, vol. XV. p. xxiv, &c.) The standard barometer used for recording the pressure of the air is by Newman. This was used uninterruptedly till Feb. 22, when it was found necessary to take it to pieces for the purpose of repairing its index. On account of various accidents which happened to it, it was not used again throughout the year, its place having been supplied by a barometer by Jones, taken from the Heliometer Dome. The readings of this latter barometer are

sufficiently coincident with the standard, except during the short interval between Feb. 23 and March 1, when by inadvertence they were too high by $0^{in}\cdot05$. This would make it necessary to diminish the computed refraction, and therefore the N.P.D.'s of south stars by $\frac{1}{500}$ part. Neglecting all below one-tenth of a second, the significant corrections to be applied are contained in the following table.

Day.	Star.	Correction to N.P.D.	Day.	Star.	Correction to N.P.D.
		"			"
Feb. 23	α Leporis	—0·32		B.A.C. 3391	—0·51
	B.A.C. 1826	0·10		B.A.C. 3428	0·25
	60 Orionis	0·15		B.A.C. 3471	—0·25
	δ Ursæ Minoris S.P.	0·11			
	14 Monocerotis	0·12	Mar. 1	μ Eridani	—0·17
	1 Canis Minoris	0·10		α Leporis	0·31
	δ^2 Canis Minoris	0·13		B.A.C. 1967	0·74
	5 Puppis	0·24		Radcliffe 3900 S.P.	0·11
	12 Puppis	0·43		Sirius	0·29
	κ Cephei S.P.	0·15		m Puppis	0·49
	g Mali	0·53		B.A.C. 2587	0·40
	B.A.C. 3039	0·20		κ Cephei S.P.	0·14
	e Mali	0·77		f Mali	0·70
	25 Hydræ	0·24		B.A.C. 3386	0·12
	B.A.C. 3224	—0·65		44 Hydræ	—0·43

The thermometers have been in use since 1840, and were originally compared and found to agree with those formerly at the Royal Society. (*Radcliffe Observations*, vol. I. p. xix.)

Parallax and Semidiameter.—For the moon, the horizontal equatorial parallax and the semidiameter are interpolated by second differences for the time of Oxford transit from the numbers given in the Nautical Almanac without alteration. The parallax applied to the observations is computed from the formula—

Sine Parallax = r × Sine Equ. Hor. Par^x. × Sine Distance from Geocentric Zenith,

where log $r = 9\cdot9991091$, and the angle of the vertical is assumed to be $11'\ 10''\cdot13$, as computed with the ellipticity of the earth $\frac{1}{300}$.

For the sun, when only one limb has been observed, and for the moon and Mercury, the semidiameters given in the Nautical Almanac have been applied. The correction deduced for the semidiameter of

Venus has already been given. The corrections for defect of illumination have been computed and applied for the planets Mercury, Venus, and Mars, wherever they are needed.

In all interpolations from the Nautical Almanac the longitude of the Observatory has been assumed to be $5^m\ 2^s{\cdot}6$ west of Greenwich—this being the result of a very careful chronometrical determination made in 1842 by the late Rev. Richard Sheepshanks.

It may be mentioned, to prevent misapprehension, that no change of longitude has been occasioned by the use of the transit circle, of which the telescope occupies exactly the same position as did the transit instrument previously in use.

SECTION IV.—*Separate Results for Mean R.A. of Stars observed in the Year* 1864.—Pages 2 to 35.

In all which has preceded, it has been attempted to give an adequate explanation of the various processes employed in the reduction of the observations, together with a description of the Transit Circle, and of its adjustments. The reader will thus be enabled to judge of the degree of care which has been taken to insure accuracy, though the observations themselves are not printed. In what follows, reference will be made to the sections of the printed tabular matter.

The *Separate Results for Mean R.A.* need little explanation. They are taken without any alteration from the sheets in which the reductions have been performed, and the nomenclature of the stars has been previously explained.

In preceding years some peculiarities of the transits observed by Mr. Lucas were pointed out. During the present year (1864) it was found that, in almost all cases, the deduced Right Ascensions of unknown stars, though reduced with the clock-errors observed by himself by the use of the fundamental stars, are conspicuously larger than those of the same stars resulting from the observations of Mr. Quirling—which latter agree, in general, accurately with my own determinations. Mr. Lucas continued to observe with the transit circle alternately with Mr. Quirling till May 7, after which time the instrument has been used exclusively (except in casual instances, or during intervals of absence) by Mr. Quirling.

The notes which follow the *Separate Results in R.A.* are necessary for enabling a judgment to be formed of the effect which atmospheric and accidental circumstances may have had on the quality of the observations. A note is also given for every case wherein a star has been observed over a smaller number of wires than five.

SECTION V.—*Separate Results for Mean N.P.D. of Stars observed in the Year* 1864.—Pages 44 to 81.

The results are copied without alteration from the sheets in which the reductions to Mean N.P.D. of the Circle observations are performed. The same colatitude has been used as in former years, namely 38° 14′ 24″·8; and, for its correction, use has been made of all suitable observations of stars observed above and below pole in the year 1864. A table, exhibiting the result of this investigation, will be given in the sequel.

For the purpose of discovering whether, with regard to the observations made by reflexion, there is any difference following a law between the reflexion-results and the direct-results, the following table has been drawn out, which exhibits the stars in the order of North Polar Distance, and the separate values of the seconds of reflexion-results (R) and of direct-results (D).

Excess of Reflexion-results above Direct-results for observations of Zenith Distance with the Transit Circle, for 1864.

Name of Star.	Approximate N.P.D.	Seconds of R.	Seconds of D.	R—D.	Number of Obs. R.	Number of Obs. D.	Weight.
	° ′	″	″	″			
Groomb. 4101 S.P....	− 3 27	−31·94	−33·56	+1·62	1	4	3
Polaris S.P.	− 1 25	−54·49	−55·88	+1·39	2	18	7
λ Ursæ Minoris S.P.	− 1 5	−53·62	−54·87	+1·25	1	5	3
λ Ursæ Minoris	+ 1 5	54·22	55·12	−0·90	2	9	7
Polaris	1 25	57·42	57·72	−0·30	6	20	18
Groombridge 1871 ...	2 48	29·00	27·71	+1·29	1	3	3
Radcliffe 4208	3 28	56·35	59·03	−2·68	1	3	3
Groombridge 750 ...	4 49	33·60	32·35	+1·25	2	5	3
Groombridge 1620 ...	5 4	35·57	37·78	−2·21	4	3	7
Radcliffe 2218	5 17	53·94	54·32	−0·38	1	1	2
Radcliffe 2404	5 26	41·77	46·42	−4·65	1	1	2
Groombridge 1359 ...	5 34	44·50	40·89	+3·61	1	1	2
Groombridge 595 ...	5 35	52·76	50·13	+2·63	1	2	3
B.A.C. 7230	6 51	3·01	1·08	+1·93	1	1	2
B.A.C. 2677	7 9	29·06	28·72	+0·34	1	1	2
B.A.C. 2326	7 20	17·93	18·77	−0·84	2	2	4
ε Ursæ Minoris	7 45	40·72	40·17	+0·55	1	1	2
B.A.C. 4527	10 39	14·21	13·77	+0·44	2	2	4

Name of Star.	Approximate N.P.D.	Seconds of R.	Seconds of D.	R—D.	Number of Obs. R.	Number of Obs. D.	Weight.
	° ′	″	″	″			
Groombridge 2900 ...	10 40	21·75	23·05	— 1·30	1	1	2
Radcliffe 1928.........	11 3	32·57	33·28	— 0·71	2	2	4
ζ Ursæ Minoris	11 47	18·75	19·90	— 1·15	2	2	4
θ Ursæ Minoris	12 12	58·55	61·11	— 2·56	2	2	4
Groombridge 1852 ...	12 20	59·98	63·54	— 3·56	1	1	2
γ Cephei	13 8	37·24	36·53	+ 0·71	4	4	8
19 Ursæ Minoris......	13 47	53·12	52·29	+ 0·83	2	1	3
3 Ursæ Minoris	14 46	42·32	41·12	+ 1·20	1	1	2
β Ursæ Minoris	15 17	19·25	18·77	+ 0·48	3	4	7
B.A.C. 1509............	16 27	42·95	41·34	+ 1·61	1	1	2
11 Cephei	19 19	51·73	50·08	+ 1·65	1	1	2
Groombridge 1697 ...	19 25	22·12	20·77	+ 1·35	1	1	2
β Cephei...............	20 2	9·05	9·23	— 0·18	4	6	10
ε Draconis	20 5	43·07	43·68	— 0·61	2	2	4
Radcliffe 2543.........	21 53	36·09	37·37	— 1·28	1	1	2
ι Cephei	24 31	51·97	52·82	— 0·85	3	3	6
ε Cassiopeiæ	27 0	4·38	4·73	— 0·35	1	1	2
B.A.C. 4392............	27 14	42·76	40·47	+ 2·29	1	1	2
B.A.C. 3904............	27 28	53·55	53·87	— 0·32	1	1	2
α Cephei	27 59	22·82	23·81	— 0·99	5	6	11
υ Ursæ Majoris	30 19	25·31	25·06	+ 0·25	2	2	4
2 Lyncis	30 57	43·28	43·79	— 0·51	1	1	2
B.A.C. 1237............	31 14	38·15	40·17	— 2·02	1	1	2
α Cassiopeiæ	34 13	33·42	31·71	+ 1·71	1	1	2
μ Andromedæ.........	52 14	22·93	20·14	+ 2·79	1	4	3
11 Cygni	53 21	25·31	22·65	+ 2·66	1	1	2
B.A.C. 3112............	55 34	64·67	59·43	(+ 5·24)	1	1	2
55 Persei...............	56 11	12·26	14·79	— 2·53	1	1	2
ο Persei	56 28	26·52	29·21	— 2·69	1	1	2
β Lyræ	56 48	34·98	33·93	+ 1·05	1	2	3
Castor	57 49	62·72	57·57	(+ 5·15)	1	1	2
22 Leonis Minoris ...	57 51	29·31	27·91	+ 1·40	1	1	2
ζ Herculis	58 9	57·72	57·62	+ 0·10	1	1	2
ρ Boötis	59 2	46·53	48·85	— 2·32	2	2	4
ζ Cygni	60 20	44·41	45·21	— 0·80	5	7	12
B.A.C. 4640	60 40	53·37	50·98	+ 2·39	1	1	2
Pollux	61 39	54·97	53·31	+ 1·66	4	4	8
α Andromedæ	61 40	38·94	36·48	+ 2·46	1	2	3
21 Vulpeculæ	61 43	53·98	56·07	— 2·09	1	1	2

Name of Star.	Approximate N.P.D.	Seconds of R.	Seconds of D.	R—D.	Number of Obs. R.	Number of Obs. D.	Weight.
	° ′	″	″	″			
11 Boötis	61 57	17·26	19·08	—1·82	1	1	2
B.A.C. 7757	62 4	49·77	51·51	—1·74	1	1	2
ε Boötis	62 21	4·56	2·20	+2·36	2	4	5
61 Pegasi	62 29	32·60	35·19	—2·59	1	2	3
α Coronæ	62 50	33·49	32·26	+1·23	2	3	5
μ Leonis	63 21	12·57	15·88	—3·31	1	1	2
B.A.C. 4178	63 24	39·69	37·28	+2·41	1	1	2
Lalande 21095	63 50	49·61	53·48	—3·87	1	1	2
16 Pegasi	64 43	48·54	48·88	—0·34	2	9	7
B.A.C. 5597	64 53	35·92	36·58	—0·66	2	2	4
ι Pegasi	65 19	2·36	5·25	—2·89	1	4	3
69 Pegasi	65 35	44·86	45·46	—0·60	1	4	3
ε Leonis	65 36	2·94	4·72	—1·78	1	2	3
η Tauri	66 19	5·56	5·64	—0·08	1	3	3
α Arietis	67 10	55·93	56·71	—0·78	1	5	3
ν Geminorum	69 42	14·16	16·51	—2·35	1	1	2
β Arietis	69 51	28·40	28·96	—0·56	3	7	8
Arcturus	70 6	27·11	29·69	—2·58	1	2	3
5 Vulpeculæ	70 10	13·95	11·61	+2·34	1	3	3
B.A.C. 7528	70 21	47·73	47·98	—0·25	1	2	3
δ Arietis	70 47	23·66	23·93	—0·27	1	7	4
η Boötis	70 55	7·75	9·52	—1·77	2	3	5
τ Boötis	71 52	50·58	47·03	+3·55	1	1	2
γ Serpentis	73 54	34·83	33·25	+1·58	2	2	4
β Leonis	74 40	3·33	2·37	+0·96	2	2	4
η Piscium	75 21	23·62	22·20	+1·42	1	4	3
B.A.C. 7912	76 11	30·54	33·75	—3·21	1	1	2
ζ Aquilæ	76 20	7·75	12·24	—4·49	1	3	3
B.A.C. 4005	76 58	60·67	55·91	+4·76	1	4	3
86 Pegasi	77 22	37·78	38·81	—1·03	1	1	2
Regulus	77 22	11·98	8·78	+3·20	1	1	2
1 Canis Minoris	78 4	0·53	0·14	+0·39	1	1	2
ε Delphini	79 9	23·79	22·99	+0·80	2	4	5
A Leonis	79 20	16·06	12·34	+3·72	1	3	3
ε Pegasi	80 45	47·48	49·82	—2·34	2	5	6
π Leonis	81 18	18·56	16·86	+1·70	1	7	4
β Canis Minoris	81 26	21·37	20·78	+0·59	1	1	2
α Orionis	82 37	15·31	16·96	—1·65	1	1	2
ε Hydræ	83 5	4·77	3·68	+1·09	1	1	2

By grouping the preceding results in the usual way, we get the following table.

Excess of Reflexion-result above Direct-result from Groups of Stars.

Extent of Group.	Weight.	Mean N.P.D.	Mean Zenith Distance.	Mean Value of R—D.	Mean Corr. to D.
		° ′	° ′	″	″
Groomb. 4101 S.P. to Groomb. 595	63	2 2	−36 12	−0·07	−0·04
B.A.C. 7230 to B.A.C. 1509	50	11 55	−26 19	0·00	0·00
11 Cephei to α Cassiopeiæ	53	25 11	−13 3	−0·27	−0·14
μ Andromedæ to Lalande 21095...	70	60 11	+21 57	+0·10	+0·05
16 Pegasi to β Leonis...............	63	68 52	+30 38	−0·42	−0·21
η Piscium to ϵ Hydræ..............	41	79 35	+41 21	+0·55	+0·28

The mean values of R—D are on the whole insignificant, but if we suppose, as usual, that they can be represented under the form

$$a + b \sin \text{zenith distance},$$

(as they appear to change sign at the zenith,) then we shall have, as the most probable representative of the correction to direct observations,

$$-0''{\cdot}02 + 0''{\cdot}11 \sin \text{zenith distance};$$

and correction to reflexion-observations,

$$+ 0{\cdot}02 - 0{\cdot}11 \sin \text{zenith distance}.$$

I have not, however, thought it worth while to apply any correction for discordance of R and D, and the result seems to shew that the assumed zenith-points are very accurate.

In the year 1864, as usual, a considerable number of circumpolar stars, observed in N.P.D. above and below pole, were available for the determination of the correction due to the assumed colatitude. The results are given in the following table, which needs no explanation, excepting that the weights are, as far as Radcliffe 1923, the nearest whole numbers to those calculated from the expression $\frac{20\, nn'}{n + n'}$, where n and n' are respectively the number of observations above and below the pole. To the observation of each of these stars, considered with reference to its distance from the zenith, is attributed equal weight, as the differences of zenith distance of all of them are so small; but to the remainder decreasing weights are attributed, the lowest being $\frac{12\, nn'}{n + n'}$.

Correction to Assumed Colatitude, 1864.

Star's Name, and Mode of Observation.	Num. of Obs.	N.P.D. Uncorrected.	N.P.D. corrected for R—D.	Num. of Obs.	Concluded N.P.D. on Assumed Colatitude.	Num. of Obs.	Algebraic Sum of Determinations.	Weight.	Product.
		° ′ ″	″		″		″		″
λ Ursæ Min. D	9	1 5 55·12		11	54·96	17	+0·30	75	+22·50
R	2	54·22							
S.P. D	5	−1 5 54·87		6	−54·66				
R	1	53·62							
Polaris D	20	1 24 57·72		26	57·65	46	+1·91	226	+431·66
R	6	57·42							
S.P. D	18	−1 24 55·88		20	−55·74				
R	2	54·49							
Radcliffe 559 D	1	1 28 10·14		1	10·14	2	−3·67	10	−36·70
S.P. D	1	−1 28 13·81		1	−13·81				
Radcliffe 2594 D	1	1 37 21·23		1	21·23	3	−1·22	13	−15·86
S.P. D	2	−1 37 22·45		2	−22·45				
Cep. 51 (Hev.) D	11	2 45 18·20		11	18·20	35	+0·38	151	+57·38
S.P. D	24	−2 45 17·82		24	−17·82				
Groomb. 1871 D	3	2 48 27·71		4	28·03	7	−1·00	34	−34·00
R	1	29·00							
S.P. D	3	−2 48 29·03		3	−29·03				
δ Ursæ Min. D	21	3 23 47·76		21	47·76	31	+0·69	135	+93·15
S.P. D	10	−3 23 47·07		10	−47·07				
Radcliffe 4208 D	3	3 27 59·03		4	58·36	5	−3·69	16.	−59·04
R	1	56·35							
S.P. D	1	−3 27 62·05		1	−62·05				
Groomb. 2210 D	4	3 29 28·19		4	28·19	7	+1·18	34	+40·12
S.P. D	3	−3 29 27·01		3	−27·01				
Groomb. 3548 D	4	3 31 56·40		4	56·40	7	+2·03	34	+69·02
S.P. D	3	−3 31 54·37		3	−54·37				
Radcliffe 713 D	3	3 32 56·16		3	56·16	4	+0·77	15	+11·55
S.P. D	1	−3 32 55·39		1	−55·39				
Groomb. 2099 D	5	3 35 29·55		5	29·55	6	+2·78	17	+47·26
S.P. D	1	−3 35 26·77		1	−26·77				

Star's Name, and Mode of Observation.		Num. of Obs.	N.P.D. Uncorrected.	N.P.D. corrected for R—D.	Num. of Obs.	Concluded N.P.D. on Assumed Colatitude.	Num. of Obs.	Algebraic Sum of Determinations.	Weight.	Product.
			° ′ ″	″		″		″		″
Groomb. 1850	D	1	3 39 33·62		1	33·62	2	+0·04	10	+ 0·40
S.P.	D	1	−3 39 33·58		1	−33·58				
Radcliffe 3075	D	1	4 1 48·21		1	48·21	2	−2·66	10	−26·60
S.P.	D	2	−4 1 50·87		1	−50·87				
Radcliffe 3523	D	1	4 18 47·09		1	47·09	3	+0·31	13	+ 4·03
S.P.	D	2	−4 18 46·78		2	−46·78				
Radcliffe 6099	D	3	4 19 50·95		3	50·95	4	−2·17	15	−32·64
S.P.	D	1	−4 19 53·12		1	−53·12				
Groomb. 67	D	3	4 25 57·69		3	57·69	5	+0·28	24	+ 6·72
S.P.	D	2	−4 25 57·41		2	−57·41				
Groomb. 1418	D	3	4 28 30·70		3	30·70	4	−0·73	15	−10·95
S.P.	D	1	−4 28 31·43		1	−31·43				
Groomb. 2507	D	1	4 32 61·09		1	61·09	2	+3·04	10	+30·40
S.P.	D	1	−4 32 58·05		1	−58·05				
Groomb. 3820	D	4	4 34 43·43		4	43·43	8	+1·82	40	+72·80
S.P.	D	4	−4 34 41·61		4	−41·61				
Radcliffe 3475	D	1	4 43 56·66		1	56·66	2	−1·65	10	−16·50
S.P.	D	1	−4 43 58·31		1	−58·31				
Groomb. 750	D	5	4 48 32·35		7	32·71	13	−0·08	65	− 5·20
	R	2	33·60							
S.P.	D	6	−4 48 32·79		6	−32·79				
Groomb. 1620	D	3	5 3 37·78		7	36·83	11	+0·13	51	+ 6·63
	R	4	35·57							
S.P.	D	4	−5 3 36·70		4	−36·70				
Radcliffe 3685	D	3	5 7 3·64		3	3·64	4	+0·36	15	+ 5·40
S.P.	D	1	−5 7 3·28		1	− 3·28				
Radcliffe 2218	D	1	5 16 54·32		2	54·13	3	+3·36	13	+43·68
	R	1	53·94							
S.P.	D	1	−5 16 50·77		1	−50·77				
Radcliffe 2404	D	1	5 25 46·42		1	46·42	4	−0·82	15	−12·30
S.P.	D	3	−5 25 47·24		3	−47·24				

Star's Name, and Mode of Observation.		Num. of Obs.	N.P.D. Uncorrected.	N.P.D. corrected for R—D.	Num. of Obs.	Concluded N.P.D. on Assumed Colatitude.	Num. of Obs.	Algebraic Sum of Determinations.	Weight.	Product.
			° ′ ″	″		″		″		″
Groomb. 595	D	2	5 34 50·13		3	51·01	5	+2·66	24	+63·84
	R	1	52·76							
S.P.	D	2	− 5 34 48·35		2	−48·35				
Groomb. 1923	D	1	5 36 34·86		1	34·86	4	+1·50	15	+22·50
S.P.	D	3	− 5 36 33·36		3	−33·36				
Radcliffe 2162	D	1	5 36 59·77		1	59·77	3	+0·09	13	+ 1·17
S.P.	D	2	− 5 36 59·68		2	−59·68				
ζ Ursæ Min.	D	2	11 47 19·90		4	19·33	8	−0·80	38	−30·40
	R	2	18·75							
S.P.	D	4	−11 47 20·13		4	−20·13				
γ Cephei	D	4	13 7 36·53		8	36·89	9	+0·82	16	+13·12
	R	4	37·24							
S.P.	D	1	−13 7 36·07		1	−36·07				
β Ursæ Min.	D	4	15 17 18·77		7	18·98	10	−0·81	36	−29·16
	R	3	19·25							
S.P.	D	3	−15 17 19·79		3	−19·79				
β Cephei	D	6	20 2 9·23		10	9·04	17	−0·24	66	−15·84
	R	4	9·05							
S.P.	D	7	−20 2 9·28		7	− 9·28				
ξ² Cephei	D	2	26 2 2·85		2	2·85	4	−0·25	15	− 3·75
S.P.	D	2	−26 2 3·10		2	− 3·10				
α Ursæ Maj.	D	1	27 30 56·92		1	56·92	8	+2·84	12	+34·08
S.P.	D	7	−27 30 54·08		7	−54·08				
α Cephei	D	6	27 59 23·81		11	23·36	18	+0·14	50	+ 7·00
	R	5	22·82							
S.P.	D	6	−27 59 23·22		7	−23·22				
γ Ursæ Maj.	D	5	35 32 56·87		5	56·87	10	+1·91	27	+52·92
S.P.	D	4	−35 32 54·96		5	−54·96				

If z be the correction to the assumed colatitude, we shall have, by dividing the sum of the products in the last column of the table by the sum of the weights,

$$2\,z + 0''{\cdot}59 = 0\,;$$

or $$z = -0''{\cdot}30.$$

This result is rather smaller than that obtained in previous years, but I have used it, with scarcely any alterations, for the year 1864; that is, all the N.P.D.'s in the Catalogue of Stars observed above pole have been diminished by 0″·30, and all N.P.D.'s observed below pole have been increased by 0″·30.

SECTION VI.—*Catalogue of Concluded Mean Right Ascensions and Mean North Polar Distances for* 1864, *Jan.* 1, *of Stars observed in the Year* 1864; *with the Annual Precessions.*—Pages 84 to 126.

Some of the columns require no explanation, and notice will be taken only of those which require it.

The magnitudes of the stars which are set down are those which have been observed in the year 1864.

The Mean Right Ascensions for 1864, Jan. 1, are the means of those given in the *Separate Results for R.A.*, without any alteration, excluding those results inclosed within brackets.

The precessions in R.A. for stars in the Nautical Almanac List are taken from that work, and therefore in general include proper motion. These precessions are marked with an asterisk. For stars included in the British Association Catalogue the geometrical precessions there given are set down, due regard being had to secular variation in bringing up the right ascensions to 1864. The precessions for all other stars are computed with the constants given in the *Tabulæ Regiomontanæ*.

The same explanation will serve for the precessions in N.P.D., excepting that none of them needed computing, since, the precession being a function of R.A. only, they are easily taken from the B.A.C.

The Mean North Polar Distances for 1864, Jan. 1, are the means of those given for each star in the Section of *Separate Results for N.P.D.*, corrected for error of colatitude, as investigated in the preceding section of the Introduction.

The Notes at the end of the catalogue are the result of a very careful scrutiny and comparison with the B.A.C. and other Catalogues, and serve to shew that Lacaille's right ascensions are in general greatly in error.

On account of the discordance between the zenith points deduced from stars and those deduced from the observations of the reflected image of the wire, and of the consequent necessity for an elaborate scrutiny of the results in N.P.D., I have thought it desirable, as in 1863, to compare the Concluded Mean N.P.D.'s, as given in the Catalogue of Stars for 1864, with the Greenwich results as deduced

from the "Greenwich Seven-Year Catalogue," for all stars common to the two catalogues which have been observed a sufficient number of times. The following table gives the result of the comparison.

Comparison of the N.P.D.'s of Stars observed at the Radcliffe Observatory, Oxford, in 1864, *with the N.P.D.'s of the Greenwich Seven-Year Catalogue.*

Star.	Num. of Oxford Obs.	Greenwich Mean N.P.D. 1864, Jan. 1.	Oxford Seconds of N.P.D.	Excess of Greenwich.
		° ′ ″	″	″
γ Ursæ Majoris S.P.	4	−35 32 56·48	55·26	− 1·22
α Cephei S.P.	6	−27 59 23·58	23·52	− 0·06
α Ursæ Majoris S.P.	7	−27 30 55·26	54·38	− 0·88
ξ^2 Cephei S.P.	2	−26 2 3·39	3·40	+ 0·01
β Cephei S.P.	7	−20 2 9·48	9·58	+ 0·10
β Ursæ Minoris S.P.	3	−15 17 19·39	20·09	+ 0·70
γ Cephei S.P.	1	−13 7 36·86	36·37	− 0·49
ζ Ursæ Minoris S.P.	4	−11 47 19·95	20·43	+ 0·48
δ Ursæ Minoris S.P.	10	− 3 23 47·50	47·37	− 0·13
Cephei 51 (Hev.) S.P.	24	− 2 45 18·06	18·12	+ 0·06
Polaris S.P.	20	− 1 24 56·82	56·04	− 0·78
λ Ursæ Minoris S.P.	6	− 1 5 54·82	54·96	+ 0·14
λ Ursæ Minoris	11	1 5 54·82	54·66	+ 0·16
Polaris	26	1 24 56·82	57·35	− 0·53
Cephei 51 (Hev.)	11	2 45 18·06	17·90	+ 0·16
δ Ursæ Minoris	21	3 23 47·50	47·46	+ 0·04
ζ Ursæ Minoris	4	11 47 19·95	19·03	+ 0·92
γ Cephei	8	13 7 36·86	36·59	+ 0·27
β Ursæ Minoris	7	15 17 19·39	18·68	+ 0·71
β Cephei	10	20 2 9·48	8·86	+ 0·62
ε Draconis	2	20 4 43·02	43·07	− 0·05
ι Cephei	6	24 30 52·72	52·10	+ 0·62
ξ^2 Cephei	2	26 2 3·39	2·55	+ 0·84
α Ursæ Majoris	1	27 30 55·26	56·62	− 1·36
α Cephei	11	27 59 23·58	23·03	+ 0·55
υ Ursæ Majoris	4	30 19 26·01	24·89	+ 1·12
γ Ursæ Majoris	5	35 32 56·48	56·57	− 0·09
μ Andromedæ	5	52 14 20·82	20·40	+ 0·42
β Lyræ	3	56 47 35·67	33·98	+ 1·69
ρ Boötis	4	59 1 48·52	47·39	+ 1·13

Star.	Num. of Oxford Obs.	Greenwich Mean N.P.D. 1864, Jan. 1.	Oxford Seconds of N.P.D.	Excess of Greenwich.
		° ′ ″	″	″
ζ Cygni	12	60 19 46·04	44·58	+ 1·46
Pollux	8	61 38 54·37	53·84	+ 0·53
α Andromedæ	3	61 39 38·15	37·00	+ 1·15
ε Boötis	6	62 21 2·77	2·69	+ 0·08
32 Vulpeculæ	5	62 27 29·03	28·92	+ 0·11
α Coronæ	5	62 49 32·44	32·45	— 0·01
16 Pegasi	11	64 42 48·93	48·52	+ 0·41
ι Pegasi	5	65 19 4·87	4·37	+ 0·50
η Tauri	4	66 19 5·93	5·32	+ 0·61
α Arietis	6	67 10 56·60	56·28	+ 0·32
υ^1 Tauri	5	67 29 53·33	52·88	+ 0·45
ι Tauri	4	68 36 28·15	25·71	+ 2·44
τ^1 Arietis	4	69 20 44·50	42·82	+ 1·68
β Arietis	10	69 51 29·95	28·49	+ 1·46
Arcturus	3	70 6 28·92	28·53	+ 0·39
δ Arietis	8	70 47 24·42	23·60	+ 0·82
η Boötis	5	70 55 9·33	8·51	+ 0·82
ε Tauri	4	71 7 27·81	27·28	+ 0·53
ζ Cancri	4	71 56 41·70	41·19	+ 0·51
λ Geminorum	4	73 13 3·09	0·00	(+ 3·09)
γ Serpentis	4	73 53 32·43	33·74	— 1·31
β Leonis	4	74 40 4·02	2·55	+ 1·47
ε Aquilæ	5	75 6 50·53	49·66	+ 0·87
η Piscium	5	75 21 23·13	22·18	+ 0·95
ζ Aquilæ	3	76 20 10·59	10·82	— 0·23
ω Aquilæ	5	78 38 50·80	51·13	— 0·33
κ Cancri	4	78 47 12·06	11·02	+ 1·04
ε Delphini	6	79 9 25·01	22·95	+ 2·06
A Leonis	4	79 20 13·98	12·97	+ 1·01
γ Aquilæ	5	79 42 57·29	57·53	— 0·24
ζ Pegasi	3	79 52 40·04	39·30	+ 0·74
72 Ophiuchi	5	80 27 10·77	9·58	+ 1·19
ε Pegasi	7	80 44 49·85	48·85	+ 1·00
π Leonis	8	81 18 17·49	16·77	+ 0·72
ξ^2 Ceti	4	82 9 5·25	3·63	+ 1·62

Star.	Num. of Oxford Obs.	Greenwich Mean N.P.D. 1864, Jan. 1.	Oxford Seconds of N.P.D.	Excess of Greenwich.
		° ′ ″	″	″
ε Piscium	4	82 50 34·74	34·05	+ 0·72
α Serpentis	3	83 8 39·44	39·24	+ 0·20
ω Piscium	9	83 53 22·89	22·39	+ 0·50
β Aquilæ	3	83 55 50·24	50·48	− 0·24
ν Piscium	5	85 12 6·84	7·94	− 1·10
34 Sextantis	6	85 42 26·34	26·64	− 0·30
α Ceti	4	86 26 45·29	45·85	− 0·56
δ Aquilæ	7	87 9 13·65	14·11	− 0·46
γ Piscium	8	87 27 37·85	37·10	+ 0·75
κ Piscium	6	89 29 18·99	17·95	+ 1·04
δ Ceti	5	90 15 37·12	36·26	+ 0·86
γ Aquarii	9	92 4 16·73	17·71	− 0·98
12 Ceti	5	94 42 33·19	32·99	+ 0·20
θ Aquarii	9	98 27 33·57	34·28	− 0·71
ξ Aquarii	5	98 27 44·87	45·57	− 0·70
ι Ceti	8	99 34 41·36	41·56	− 0·20
κ Virginis	4	99 38 21·14	21·18	− 0·04
δ Eridani	4	100 13 33·55	33·55	0·00
Spica	6	100 27 1·34	2·77	− 1·43
σ Aquarii	8	101 22 21·63	23·94	− 2·31
θ Canis Majoris	4	101 52 15·27	15·25	+ 0·02
α Libræ	6	105 28 28·41	29·00	− 0·59
α Leporis	4	107 55 19·87	19·11	+ 0·76
β Ceti	4	108 44 1·41	0·74	+ 0·67
κ Libræ	3	109 14 7·10	7·76	− 0·66
μ Sagittarii	5	111 5 27·59	28·30	− 0·71
12 Libræ	3	114 5 0·62	2·10	− 1·48
θ Ophiuchi	3	114 51 36·59	38·27	− 1·68
h^2 Sagittarii	4	115 10 49·61	49·84	− 0·23
ψ Sagittarii	7	115 29 15·54	16·97	− 1·43
δ Sculptoris	4	118 52 55·59	56·68	− 1·09

Dividing the stars above into groups at convenient intervals, and taking the means, we obtain the following table.

Mean Results of the Comparison with the Greenwich Seven-Year Catalogue.

No. of Group.	Extent of Group.	Mean N.P.D.	Mean Zenith Distance.	Mean Excess of Greenwich.	Weight.
		° ′	° ′	″	
1	γ Ursæ Maj. S.P. to ζ Ursæ Min. S.P.	−23 34	−61 48	−0·21	34
2	δ Ursæ Min. S.P. to γ Cephei	+ 1 11	−37 3	−0·13	141
3	β Ursæ Min. to γ Ursæ Maj.........	25 11	−13 3	+0·52	48
4	μ Andromedæ to α Coronæ...........	60 12	+21 58	+0·74	51
5	16 Pegasi to ζ Cancri	68 28	30 14	+0·82	73
6	γ Serpentis to β Aquilæ..............	79 39	41 25	+0·68	91
7	ν Piscium to 12 Ceti	88 53	50 39	−0·06	53
8	θ Aquarii to α Libræ	100 32	62 18	−0·78	54
9	α Leporis to δ Sculptoris..............	113 0	74 46	−0·67	37

The differences between the Greenwich and the Oxford North Polar Distances exhibited in the table above, are not so large as in the preceding year, but they evidently follow the same law, and differ principally by a constant. When they are taken in connexion with the differences between the seconds of nadir point and of the zenith points obtained by direct and reflexion observations of stars, the most obvious solution of the difficulty is flexure of the circle by gravity, and it is necessary to enter upon a rigorous discussion.

Let R' be the reading of the circle, when the telescope is directed to a point whose zenith distance is approximately z, and R the reading corrected for flexure. Then, by the correct theory, neglecting the terms depending on sin z, we shall have

$$R = R' + a' \cos z + a'' \cos 2z + \text{\&c.},$$

where a' and a'' are constants to be determined. Similarly, if r and r' be the readings for the corresponding reflexion-observations, we shall have

$$r = r' - a' \cos z + a'' \cos 2z + \text{\&c.}$$

$$\therefore \frac{R+r}{2} = \frac{R'+r'}{2} + a'' \cos 2z \text{ approximately,}$$

or, to the seconds of zenith point obtained by stars, must be added

$$+a'' \cos 2z.$$

Again, let ζ be the correct zenith distance, corresponding to the zenith distance z affected by flexure; and N the observed nadir point.

Then, the correction to the observed nadir-point will plainly be

$$-a'+a'';$$

and we shall have

$$\zeta = R' + a'\cos z + a''\cos 2z + 180^\circ - N + a' - a'',$$

and, for the corresponding reflexion-observation,

$$180^\circ - \zeta = r' - a'\cos z + a''\cos 2z + 180^\circ - N + a' - a'',$$

$$\therefore 90^\circ = \frac{R'+r'}{2} + a''\cos 2z + 180^\circ - N + a' - a'';$$

$$\text{or} \quad 0 = \frac{R'+r'}{2} + 90^\circ - N + a' - a''\cdot(1-\cos 2z),$$

$$\text{or} \quad \frac{R'+r'}{2} = N - 90^\circ - a' + a''\cdot(1-\cos 2z),$$

or,

Sec^s. of observed zenith point by stars = sec^s. of observed nadir point $- a' + a''.(1-\cos 2z)$.

Using then all the materials for zenith point given by Mr. Quirling, as exhibited in the table at pages xxix to xxxiii, we obtain the following equations (taking only the means of the groups for each assumed zenith point) :—

$2''\cdot01$	=	$a' - 0\cdot360\ a''$	Weight	4.
$1\ \cdot26$	=	$a' - 0\cdot439\ a''$	„	8.
$2\ \cdot58$	=	$a' - 0\cdot444\ a''$	„	12.
$3\ \cdot25$	=	$a' - 0\cdot525\ a''$	„	8.
$2\ \cdot22$	=	$a' - 0\cdot343\ a''$	„	10.
$1\ \cdot76$	=	$a' - 0\cdot424\ a''$	„	13.
$1\ \cdot81$	=	$a' - 0\cdot488\ a''$	„	12.
$1\ \cdot31$	=	$a' - 0\cdot289\ a''$	„	10.
$0\ \cdot82$	=	$a' - 0\cdot230\ a''$	„	4.
$1\ \cdot48$	=	$a' - 0\cdot453\ a''$	„	9.
$2\ \cdot53$	=	$a' - 0\cdot453\ a''$	„	4.

And, multiplying the equations by the weights and taking the mean, we get

$$1''\cdot93 = a' - 0\cdot415\ a''. \quad (a)$$

Again, if we take the mean of all the separate equations (not exhibited here) for which the coefficient of a'' is small, and the mean of all for which it is large, we obtain the two equations—

$$a' - 0\cdot133\ a'' = +1''\cdot74,$$
$$\text{and} \quad a' - 0\cdot818\ a'' = +2''\cdot34;$$
$$\text{whence} \quad a'' = -0''\cdot88,$$
$$\text{and} \quad a' = +1''\cdot82.$$

But, substituting the value of a'' in the more correct equation (a), we get

$$a' = +1''\cdot56.$$

We may conclude, therefore, from the whole investigation, that a tolerably correct representation of the correction to be applied to all circle readings, assuming that the residual errors of the observations are due to flexure of the circle, is

$$+1''\cdot50\cos z - 0''\cdot88\cos 2z.$$

And, as the error of zenith point will be

$$+a'' \cos 2z \quad \text{or} \quad -0''.88 \cos 2z,$$

of which the mean value for the year is

$$-0''.585 \times 0.88 = -0''.51\,;$$

therefore the resulting N.P.D.'s given in the catalogue would require the correction

$$+0''.51 + 1''.50 \cos z - 0''.88 \cos 2z.$$

I have tabulated this function, but it does not at all harmonize the observations with the Greenwich results, and for the present I prefer to leave the final correction undetermined, that I may have the advantage of the discussion of the observations of other years.

It would be found, however, that the empirical formula

$$-0''.94 + 1''.50 \cos z + 0''.35 \cos 2z$$

produces a close agreement with the Greenwich observations, the residual errors being—

		°	′		″
For N.P.D.	−	23	34	......	+0.22.
"	+	1	11	......	−0.53.
"		25	11	......	−0.38.
"		60	12	......	+0.04.
"		68	28	......	+0.25.
"		79	39	......	+0.46.
"		88	53	......	−0.03.
"		100	32	......	−0.35.
"		113	0	......	+0.19.

SECTION VII.—*Horizontal and Vertical Diameters; and Right Ascensions and North Polar Distances of the Sun, Moon, and Planets; (the N.P.D.'s corrected for Error of Colatitude and for Flexure of the Telescope of the Transit Circle): compared with the Nautical Almanac.* —Pages 127 to 144.

Diameters.—The "Observed Duration of Transit" of the Sun's Diameter is obtained by taking the differences of the times of transit of the first and the second limb, and the "Seconds of Nautical Almanac" are obtained from the Nautical Almanac by doubling the "Sidereal Time of the Semidiameter passing the Meridian" given in that work. Retaining only the values of the tabular error observed by Mr. Quirling, it is found that the mean of ninety-seven values of the error is $+0^s.05$. For cases in which only one limb has been observed, the Nautical Almanac value of the "Time of Transit of Semidiameter" has been adopted without alteration.

The same explanation will suffice for the vertical diameters of the

sun, except that these are corrected for refraction. The mean of one hundred and sixteen values of the error of the Nautical Almanac semidiameter is $+1''\cdot07$.

For the moon a correction is applied if necessary to the transit of that limb which is defective on account of imperfect illumination (computed in the usual way), and the difference of the transits of the two limbs is then compared with that found by doubling the value given in the Nautical Almanac in the Section of Moon-Culminating Stars, corrected if necessary for difference of longitude. The mean of four values of the error of the tabular duration of passage of semidiameter is $-0^{s}\cdot10$. The error of the tabular vertical diameter as deduced from nine observations is $-0''\cdot34$. The comparisons of the observed and tabular values of the diameters of the other planets need no explanation, excepting that those for Mercury, Venus, and Mars have been corrected for defect of illumination. The application of the tabular errors of the diameters of the planet Venus, observed in 1863, to determine the correction to be applied in 1864, has been already given. (p. xxiv.)

Right Ascensions and North Polar Distances.—The Mean Solar Times are computed by means of the table given in Warnstorff's edition of Schumacher's *Hülfstafeln*. The sidereal time at mean noon given in the Nautical Almanac is increased by $0^{s}\cdot83$ for the assumed west longitude of the Radcliffe Observatory, namely $5^{m}\ 2^{s}\cdot6$; the difference between this and the right ascension of any object is taken, and converted into the corresponding interval of mean solar time by the numbers in the *Hülfstafeln*. For cases wherein the N.P.D. of an object has been observed without a corresponding observation of R.A., the right ascension used for computing the mean solar time is that given in the Nautical Almanac, corrected, if it appears necessary, by means of the neighbouring observations.

The right ascensions of the sun's centre are generally the means of those deduced from the observations of the two limbs; if however one limb only has been observed, the duration of transit of semidiameter is taken without alteration from the Nautical Almanac, as the observed value of the tabular error is so small. It is noticeable, as in former years, that the tabular errors of the right ascensions as observed by Mr. Lucas are too large. Now, on referring to the volumes of the *Radcliffe Observations* for the years 1840, 1841, and 1842, at which time Mr. Lucas observed with the transit instrument, it is found that no such peculiarity as that just pointed out existed in 1840 and 1841, but that in 1842 the tabular errors of right ascension are quite as large as in the observations now under dis-

cussion. The tabular R.A.'s are taken from the Nautical Almanac, corrected for longitude.

In general both limbs of the sun have been observed in N.P.D., and the mean of the N.P.D.'s, corrected for error of colatitude, &c., is taken for the true observed N.P.D. When one limb only has been observed, the semidiameter of the Nautical Almanac is applied without correction.

The observed R.A.'s of the Moon's centre are derived from the observations of the limb by application of the Nautical Almanac "Duration of Passage of Semidiameter." The tabular R.A. is found by applying to the R.A. of the limb given in the section of *Moon-Culminating Stars* in the Nautical Almanac, corrected for longitude, the duration of passage of semidiameter given in the same section, similarly corrected if necessary.

The observed N.P.D.'s of the Moon's centre are corrected for assumed error of colatitude and for flexure of the telescope. The tabular N.P.D.'s are taken from the section of *Moon-Culminating Stars*, corrected for longitude.

For all the planets, the R.A. and N.P.D. are corrected for flexure of the telescope and for error of colatitude. The tabular R.A.'s and N.P.D.'s, corrected for longitude, are taken from the Nautical Almanac.

Section VIII.—*Measures of Distance and Angle of Position of the Components of Double Stars, and of the Diameters of the Planets Venus and Mars.*—Pages 145 to 178.

A full description of the Heliometer will be found in vol. XI. of the *Radcliffe Observations*, but it will be desirable to give such information as is necessary for the perfect understanding and appreciation of the observations of this section.

The divided object-glass is 7·5 inches in diameter, and its focal length is nearly 10·5 feet. The segments are mounted on curved brass plates, 22 inches long by 4·5 inches broad; both exactly equal in size, figure, and weight. When separated, they describe a portion of the circumference of a circle of which the radius is the focal length. (See vol. XI. p. 14.) The motion is produced by screws furnished with graduated heads, which can be acted on by the observer at the eye-end of the telescope by means of jointed rods carried for the greater part of their lengths inside the telescope-tube. There are two scales for each half-glass, formed of slips of silver; one on the outside of the brass plates, and one inside the telescope-tube, near the object-

glass, the position of the latter, in relation to a fixed index, being read off at the eye-end of the telescope by long micrometer-microscopes. The requisite illumination is obtained from thin platinum wires heated by a stream from a galvanic battery. The interior scale is alone employed. The scale belonging to the half-object-glass E (using Mr. Johnson's designation) has been exclusively used. There are on it 280 divisions, the interval between each two consecutive ones being about $\frac{1}{60}$th of an inch; and, as the division 140 corresponds with the middle of the scale, it has been used generally as the approximate zero for measurement.

The tube of the telescope is of hammered brass. Its diameter at the end nearest the object-glass is 13 inches, at the other extremity 9·2 inches. It is supported by a strong cradle of brass, 5 feet long, which terminates at each end with carefully-turned steel collars, on which the telescope is made to rotate, so as to give different angles of position to the line of separation of the halves of the object-glass.

The position-circle is 22·7 inches in diameter, and is placed at the end of the cradle nearest to the observer. It is divided to 10′, and can be read by means of two opposite verniers, of which one only is in general use.

The declination and polar axes are each 43 inches in length from pivot to pivot; and the circles are each 34 inches in diameter. The declination circle is divided into spaces of 4′, and is read by two opposite microscopes, one revolution being approximately equivalent to 2′. The convenience of this arrangement is, that the sum of readings of the microscopes gives (after accounting for the runs) the minutes and seconds to be added to the pointer reading, without further reduction. The hour circle is divided to single minutes of time, and is read by two opposite microscopes, one revolution of each being approximately equivalent to 20 seconds of time.

For observations made in 1864 for determining the position of the polar axis, I would refer to the *Radcliffe Observations* for 1861, page xxi. By those observations it appears that the elevation was too small by nearly two minutes of arc. I may mention in this place that I succeeded in perfectly correcting this error on Sept. 26, 1865, and that the position of the axis is now sensibly correct.

Measures of Double Stars, &c.—The description of the mounting of the object-glass of the Heliometer, and of the mode of reading its scale, will enable any person easily to follow the columns of the printed observations of double stars and planets. It has been the practice to read the scale for distinct measures of distance of a double star three

times in one position of the moveable image with regard to the fixed image (the four images being brought into line at equal distances) and then, after reading the position circle, to read the scale for three separate measures with the moveable image on the other side of the fixed image, after turning the telescope so as to bring the objects accurately into line again. The position-circle is then read a second time. The differences between the mean of all the readings for a star (which is generally taken for the zero) and the separate readings, give six separate measures of distance, which are set down in the sixth column of the printed observations.

The value in arc of one division of the scale which has been used in the reduction of the observations, namely $29''\cdot424$, is the same as that used in preceding years; and its correctness is proved by the following observations made in the early part of 1864, when advantage was taken of lower temperature than ordinary.

1864, Jan. 5. *Transits of the two images of Cephei* 51 (*Hev.*)

The position circle was set to the reading which corresponds to the equatorial position of the line of separation of the two halves of the object-glass, and the micrometer eye-piece was turned round till the two images of the stars, placed at a considerable distance apart, were accurately on the usual transit-wire, and care was taken to observe that they ran accurately by the diurnal motion along the wire. Transits of both images were then taken over the declination-wire, and the micrometer-wire placed at a small distance from it (these being the only wires available). The following is a synopsis of the results:—

With scale-reading $135^{div}\cdot000$, the mean of the intervals of five transits of the two images was $3^m\ 23^s\ 85$.

With scale-reading $145^{div}\cdot000$, the mean of the intervals of five transits of the images was $3^m\ 23^s\cdot90$.

Hence, 10 revolutions corresponded to an interval of $6^m\ 47^s\cdot75$, or $407^s\cdot75$; and the N.P.D. of the stars being $2°\ 45'\ 24''$, the resulting value of one revolution is $29''\cdot415$.

The temperature at the time of the observations was 22°.

1864, Jan. 6. *Transits of the two images of Cephei* 51 (*Hev.*)

By proceeding precisely in the same way as on Jan. 5, it was found that ten revolutions of the scale corresponded to $407^s\cdot70$, and the resulting value of one revolution is therefore $29''\cdot410$.

The temperature was 17°.

The observations made in a similar way, in 1863, (see *Radcliffe Observations*, vol. XXI. for 1861, pages xxv–xxvi,) gave a rather larger

value, namely 29″·508, at a temperature of 36°; but additional observations made in 1865 confirm the value obtained in 1864.

For obtaining the reading for the zero of the position circle, the micrometer eye-piece previously alluded to, which has one transit-wire, one fixed declination-wire, and one wire moveable by the micrometer screw, was used. A suitable star being chosen, it was kept fixed in the field by means of the driving-clock, and the images were separated by a certain interval, by giving motion to the half-object-glass E, ordinarily used as the moveable segment; and the micrometer eye-piece was turned till the two images were correctly bisected by one of the wires. The images were then allowed to pass across the field by the diurnal motion, and the whole telescope-tube was turned round by means of the attached handles till the images ran well along the wire. The vernier H of the position circle was then read. The moveable image was afterwards placed at an equal distance on the other side of the fixed image, the operation was repeated, and the vernier was read again. The mean of the two readings was taken as the equatorial point; and this, diminished by 270° or by 90°, is the polar point.

The following is a synopsis of the results:—

Day, 1864.	Object.	Sidereal Time.	Readings of Vernier H.	Polar Point.
		h. m.	° ′	° ′
Apr. 23	ψ Boötis	12 20	{291 31, 291 31}	21 31
	γ Virginis	12 30	{290 47, 292 30}	21 39
	υ Leonis	12 45	{291 22, 291 42}	21 32
Apr. 29	Regulus	10 7	{291 58, 290 20}	21 9
	83 Cancri	11 3	{290 19, 293 29}	21 54
May 7	Regulus	10 50	{112 0, 111 4}	21 32
			Mean =	21 33

The polar point used throughout the year 1864 was 21° 33′.

The *Catalogue of the Distances and Angles of Position of the Double Stars* requires very little explanation. The stars are simply arranged in order of right ascension, and the approximate R.A. and N.P.D. are given for the epoch 1864 to facilitate reference to other catalogues.

The stars selected for observation during the year 1864 consist chiefly of the *Lucidæ* given in Struve's *Mensuræ Micrometricæ*, classes iii. to viii. inclusive, the object of the observations being to determine whether they have in general experienced orbital motion since the epoch of Struve's observations.

SECTION IX.—*Observations of Eclipses of Jupiter's Satellites; and of Occultations of Stars by the Moon.*—Pages 179 to 181.

The instruments with which the observations were made are mentioned in the table on page 198, and the clock or chronometer was compared with the transit-clock at the time of each observation or very near to it, so that no doubt exists as to the accuracy of the Oxford Mean Solar Times.

All the lunar and solar elements for the time of observation of an occultation, namely the Geocentric R.A. and N.P.D. of the moon's centre (A and D), and the horizontal equatorial parallax and semidiameter (P and S), were interpolated with second differences from the data of the Nautical Almanac, and Airy's correction was applied to produce the parallax (P') applicable to the point on the limb at which the occultation took place.

Then, if the R.A. (in arc) and the N.P.D. of the star, which are the same, for the instant of occultation, as those for the apparent position of the point on the limb, be denoted by a' and Δ', and the apparent hour angle by h', the geocentric values being a, Δ, and h, the following formula (see my *Astronomy*, page 346) will express very approximately the value of $h'-h$, or of δh,

$$\text{Sin}\,\delta h = Q' \cdot \frac{\text{Sin}\,h'}{\text{Sin}\,\Delta'} \cdot \frac{1}{1 - Q''\text{Cos}\,\Delta'(1 - \text{Cot}\,\phi'\,\text{Cot}\,\Delta'\,\text{Cos}\,h')},$$

where $Q' = \rho\,\text{Sin}\,P'\,\text{Cos}\,\phi'$, ($\phi'$ being the geocentric latitude,)

and $Q'' = \rho\,\text{Sin}\,P'\,\text{Sin}\,\phi'$.

In deducing this formula from the correct equation,

$$\begin{aligned}\text{Sin}\,\delta h &= Q'\frac{\text{Sin}\,h'}{\text{Sin}\,\Delta},\\ &= Q'\frac{\text{Sin}\,h'}{\text{Sin}\,(\Delta' - \delta\Delta)},\\ &= Q' \cdot \frac{\text{Sin}\,h'}{\text{Sin}\,\Delta'\,\text{Cos}\,(\delta\Delta) - \text{Cos}\,\Delta'\,\text{Sin}\,(\delta\Delta)}:\end{aligned}$$

by the substitution for $\delta\Delta$ of the well-known value,

$$\text{Sin}\,\delta\Delta = \rho\,\text{Sin}\,P'\left\{\text{Sin}\,\phi'\,\text{Sin}\,\Delta' - \text{Cos}\,\phi'\,\text{Cos}\,\Delta'.\frac{\text{Cos}\left(h' - \frac{\delta h}{2}\right)}{\text{Cos}\,\frac{\delta h}{2}}\right\},$$

it has been assumed, first, that Cos h' may be substituted without

error for $\dfrac{\text{Cos}\left(h' - \frac{\delta h}{2}\right)}{\text{Cos}\,\frac{\delta h}{2}}$, and secondly, that unity may be used, instead of $1 - \frac{(\delta\Delta)^2}{2}$, for Cos $(\delta\Delta)$ in the expansion of Sin $(\Delta' - \delta\Delta)$. The sum of the errors arising from neglected quantities will amount at the maximum to rather more than $0''\cdot3$. But, that absolute accuracy may be arrived at, I have tabulated the effects.

It will be found by expansion that the error of the substitution of Cos h' for $\dfrac{\text{Cos}\left(h' - \frac{\delta h}{2}\right)}{\text{Cos}\,\frac{\delta h}{2}}$ will be

$$-[9\cdot0498] \times \text{Sin}^3 h' \,\text{Cot}^2 \Delta' \,\text{Cosec}\, \Delta',$$

and the following table gives the values of the correction to be applied to the computed value of δh:—

Δ'	h'							
	20°	30°	40°	50°	60°	70°	80°	90°
°	"	"	"	"	"	"	"	"
60	—0·002	—0·005	—0·011	—0·019	—0·028	—0·036	—0·041	—0·043
65	·001	·003	·007	·012	·017	·022	·026	·027
70	·001	·002	·004	·007	·010	·013	·015	·016
75	·000	·001	·002	·004	·005	·007	·008	·008
80	·000	·000	·001	·002	·002	·003	·003	·004
85	·000	·000	·000	·000	·001	·001	·001	·001

The effect of the omission of the second term in the expansion of Cos $(\delta\Delta')$ is $+ \frac{1}{2}\,\delta h\,(\delta\Delta)^2\,\text{Sin}^2\,1''$, to be applied to the computed values of δh. It is tabulated as follows:—

$\delta\Delta$	δh						
	5′	10′	15′	20′	25′	30′	35′
′	″	″	″	″	″	″	″
25	+0·008	+0·016	+0·024	+0·032	+0·040	+0·048	+0·056
30	·011	·023	·035	·046	·057	·068	·080
35	·016	·031	·046	·062	·078	·094	·109
40	·020	·040	·060	·081	·101	·121	·142
45	·026	·051	·077	·103	·128	·154	·180
50	·032	·064	·096	·127	·159	·191	·222
55	·038	·077	·116	·154	·192	·230	·269
60	·046	·092	·138	·183	·229	·275	·320

I have, however, done away with the necessity for the use of the first of these tables by computing, for small intervals of h' and Δ', (for the mean value of P,) very approximate values of δh, by which means the value of $h' - \frac{\delta h}{2}$ can be obtained immediately with sufficient accuracy.

δh having been computed, $h = h' - \delta h$ is found, as also a, the R.A. of the geocentric position of the corresponding point, by means of the right ascension of the zenith.

Then $\delta\Delta$ is computed by the formula:

$$\text{Sin}\,\delta\Delta = \rho\,\text{Sin}\,P'\,\text{Sin}\,\phi'\,\frac{\text{Sin}\,(\Delta' - \psi)}{\text{Cos}\,\psi},$$

$$\text{where}\quad \text{Tan}\,\psi = \text{Cot}\,\phi'\,\frac{\text{Cos}\left(h + \frac{\delta h}{2}\right)}{\text{Cos}\,\frac{\delta h}{2}};$$

and hence $\Delta = \Delta' - \delta\Delta$ is known.

If then a and d be the differences of geocentric R. A. and N. P. D. of the moon's centre and the corresponding point,

$$a = A - a \quad \text{and} \quad d = D - \Delta,$$

from which the geocentric distance of the point from the centre of the moon is easily found; and is equated to the moon's geocentric semidiameter increased by $\frac{n}{1000}$ part.

For the variation of the parallax in the time t, we have, for west

hour angles, if the change of parallax be applied to the position of the corresponding point,

$$d(\delta\alpha) = -d(\delta h) = 15''t \times \left\{ A\frac{\text{Cos}\,h}{\text{Sin}\,\Delta} + A'\frac{\text{Cos}\,2h}{\text{Sin}^2\Delta} \right\},$$

and $$d(\delta\Delta) = -15\,t \times \left\{\overline{A\,\text{Cos}\,\Delta + B'\,\text{Cos}\,2\Delta}.\text{Sin}\,h + A'C\,\text{Sin}\,2h\right\};$$

where $A = Q' = \rho\,\text{Sin}\,P'\,\text{Cos}\,\phi'$,

$A' = A^2 = \rho^2\,\text{Sin}^2 P'\,\text{Cos}^2\phi'$,

$B' = A\,Q'' = \rho^2\,\text{Sin}^2 P'\,\text{Sin}\,\phi'\,\text{Cos}\,\phi'$,

and $C = \text{Cot}\,\Delta\cdot(\tfrac{1}{2} + \text{Sin}^2\Delta)$.

The logarithms of the quantities A or Q' and Q'' $(= \rho\,\text{Sin}\,P'\,\text{Sin}\,\phi')$ have been tabulated at intervals of 10″ for all values of P' from 53′ 30″ to 61′ 40″, to seven places of decimals, and the values of A' and B' to five places of decimals. Log. C has also been tabulated to five places of decimals from $\Delta = 60°$ to $\Delta = 110°$ at intervals of 1°.

A general table has also been made, for mean value of P' $(= 57')$, of the values of $d(\delta h)$ and $d(\delta\Delta)$, at intervals of 5°, from $h = 0$ to $h = 100°$, and from $\Delta = 65°$ to $\Delta = 115°$, to be used as a check on the calculation by the preceding formulæ. The sign of $d(\delta\Delta)$ must be changed for east hour angles.

The other parts of the process of reduction need no explanation, as the coefficients of the corrections to parallax, and to the assumed R.A. and N.P.D. of the star and the moon's centre, as well as those which depend on the error of time t, which enter into the expression for the distance of corresponding point from the centre of the moon, are computed by formulæ precisely the same as those used at Greenwich. The formulæ for the variation of this distance will be found at page 364 of my *Astronomy* before referred to, in which however it is to be observed that, by a misprint, the coefficients of δD and $\delta\Delta$ have been affected with the same instead of different signs. For the sake of a more easy comparison of the results of occultations observed both at Greenwich and Oxford, the Greenwich notation has been retained.

ROBERT MAIN.

Radcliffe Observatory, Oxford,
1866, December 3.

RADCLIFFE OBSERVATORY,

OXFORD.

SEPARATE RESULTS

FOR

MEAN R.A. OF STARS

OBSERVED IN THE YEAR

1864.

5 Ceti.

	Obs^r.	h. m. 0. 1 s
Oct. 7	Q	14·11

α Andromedæ.

		0. 1 s
Apr. 11	Q	21·65
Sept. 24	M	21·70
Oct. 1	Q	21·79

B.A.C. 5.

		0. 1 s
Sept. 27	Q	44·91
Oct. 24	L	(45·48)

B.A.C. 12.

		0. 2 s
Nov. 10	Q	57·35

B.A.C. 17.

		0. 3 s
Nov. 26	Q	21·16

γ Pegasi.

		0. 6 s
Oct. 5	Q	13·84
14	Q	14·16

χ Pegasi.

		0. 7 s
Oct. 24	L	34·46

B.A.C. 35.

		0. 7 s
Oct. 7	Q	57·86
Nov. 3	L	57·97

B.A.C. 42.

		0. 8 s
Sept. 27	Q	58·40
30	L	58·82

B.A.C. 43.

	Obs^r.	h. m. 0. 9 s
Nov. 8	L	15·86

36 Piscium.

		0. 9 s
Nov. 4	L	34·65

ι Ceti.

		0. 12 s
Jan. 8	L	29·73
Sept. 30	L	29·78
Oct. 1	Q	29·80
5	Q	29·77
Nov. 4	L	29·91
14	Q	29·82
18	Q	29·83
29	Q	29·75
Dec. 1	L	29·90

***d* Piscium.**

		0. 13 s
Nov. 10	Q	36·03

43 Piscium.

		0. 17 s
Sept. 27	Q	35·88
29	Q	35·90

B.A.C. 91.

		0. 18 s
Oct. 7	Q	59·33
Nov. 5	L	59·64

46 Piscium.

		0. 20 s
Oct. 5	Q	53·87

B.A.C. 107.

		0. 22 s
Nov. 10	Q	32·40

12 Ceti.

	Obs^r.	h. m. 0. 23 s
Jan. 6	L	5·87
8	L	5·94
Nov. 14	Q	5·88
28	Q	5·91
29	Q	5·86
Dec. 1	L	5·91

B.A.C. 113.

		0. 23 s
Nov. 3	L	9·51
4	L	9·81

49 Piscium.

		0. 23 s
Sept. 27	Q	43·51
Nov. 5	L	43·70

51 Piscium.

		0. 25 s
Nov. 8	L	22·87

B.A.C. 135.

		0. 26 s
Oct. 5	Q	57·23
Nov. 17	Q	57·07

B.A.C. 142.

		0. 27 s
Oct. 7	Q	52·13
31	L	52·45

ε Andromedæ.

		0. 31 s
Oct. 24	L	22·51
Nov. 24	Q	22·45
28	Q	22·41
29	Q	22·48

B.A.C. 182.

		0. 34 s
Nov. 16	Q	43·30

B.A.C. 190.

	Obs^r.	h. m. 0. 35 s
Oct. 7	Q	54·15
Nov. 3	L	(54·72)
14	Q	54·35

β Ceti.

		0. 36 s
Jan. 6	L	45·42
Oct. 5	Q	45·55
Nov. 22	Q	45·61

δ Piscium.

		0. 41 s
Dec. 8	Q	37·61

ι¹ Piscium.

		0. 42 s
Nov. 28	Q	35·09

B.A.C. 237.

		0. 44 s
Jan. 6	L	18·32
Oct. 5	Q	17·98

B.A.C. 243.

		0. 46 s
Nov. 8	L	19·76
14	Q	19·41

B.A.C. 252.

		0. 48 s
Nov. 5	L	16·77
10	Q	16·66

***k* Piscium.**

		0. 48 s
Nov. 17	Q	39·87
18	Q	39·84

μ Andromedæ.

	Obsr.	h. m.
		0. 49 s
Oct. 7	Q	12·67
14	Q	12·69
Nov. 16	Q	12·67

B.A.C. 269.

		0. 50 s
Oct. 24	L	46·87

ϕ^4 Ceti.

		0. 51 s
Oct. 5	Q	55·00

B.A.C. 274.

		0. 52 s
Nov. 22	Q	46·69

ε Piscium.

		0. 55 s
Oct. 31	L	53·09
Nov. 4	L	53·13
5	L	53·13
10	Q	53·14
Dec. 8	Q	53·16

B.A.C. 299.

		0. 57 s
Nov. 28	Q	2·06
Dec. 1	L	2·23

73 Piscium.

		0. 57 s
Jan. 6	L	50·19
Oct. 7	Q	49·88

72 Piscium.

		0. 57 s
Jan. 4	L	54·89
8	L	54·81

B.A.C. 308.

	Obsr.	h. m.
		0. 58 s
Oct. 24	L	24·15

27 Ceti.

		0. 58 s
Nov. 14	Q	48·08

75 Piscium.

		0. 59 s
Nov. 4	L	24·56

B.A.C. 325.

		1. 1 s
Nov. 8	L	15·46

β Andromedæ.

		1. 2 s
Nov. 12	Q	7·60
Dec. 8	Q	7·52

ψ^3 Piscium.

		1. 2 s
Oct. 31	L	33·26

τ Piscium.

		1. 4 s
Jan. 4	L	10·52
8	L	10·52
Nov. 22	Q	10·68

ζ Piscium.

		1. 6 s
Nov. 10	Q	37·68

87 Piscium.

		1. 6 s
Nov. 3	L	54·28
8	L	54·45

B.A.C. 371.

	Obsr.	h. m.
		1. 7 s
Jan. 6	L	5·89

88 Piscium.

		1. 7 s
Nov. 5	L	38·29

B.A.C. 375.

		1. 8 s
Nov. 28	Q	11·33

α^1 Ursæ Minoris.

		1. 8 s
Apr. 22	L	55·13

Polaris.

		1. 9 s
Apr. 1	Q	19·10
1	L	18·94
2	Q	17·74
12	Q	18·22
12	Q	19·29
13	L	20·02
13	Q	19·00
14	Q	18·64
17	L	19·34
18	L	20·26
18	Q	19·78
19	Q	19·24
19	Q	19·47
20	Q	17·94
21	Q	18·17
21	Q	18·39
22	L	21·78
22	Q	22·30

41 Ceti.

		1. 10 s
Jan. 6	L	52·55
Oct. 31	L	52·30

l Piscium.

	Obsr.	h. m.
		1. 13 s
Jan. 8	L	36·58
Nov. 10	Q	36·50

43 Ceti.

		1. 15 s
Nov. 22	Q	37·57

B.A.C. 408.

		1. 15 s
Jan. 4	L	41·16
Nov. 3	L	41·43

92 Piscium.

		1. 16 s
Nov. 5	L	32·79

θ Ceti.

		1. 17 s
Jan. 6	L	13·54
Nov. 12	Q	13·58

ρ Piscium.

		1. 18 s
Jan. 2	Q	55·62

B.A.C. 430.

		1. 19 s
Jan. 8	L	2·23
Nov. 3	L	2·30

47 Ceti.

		1. 20 s
Nov. 8	L	9·03
24	Q	8·85

B.A.C. 440.

		1. 21 s
Jan. 4	L	15·39

η Piscium.

	Obsʳ.	h. m.
		1. 24
		s
Jan. 1	L	12·48
8	L	12·39
Nov. 8	L	12·44
26	Q	12·52
Dec. 8	Q	12·58

B.A.C. 464.

		1. 26
		s
Jan. 4	L	11·02
Nov. 3	L	10·68
16	Q	10·60

100 Piscium. (1st star.)

		1. 27
		s
Nov. 22	Q	38·27

B.A.C. 471.

		1. 27
		s
Jan. 1	L	44·95
2	Q	44·72

49 Ceti.

		1. 27
		s
Nov. 18	Q	59·09

B.A.C. 479.

		1. 28
		s
Nov. 8	L	38·52

50 Ceti.

		1. 29
		s
Dec. 6	Q	20·89

105 Piscium.

		1. 32
		s
Oct. 31	L	20·78
Nov. 5	L	20·75

B.A.C. 517.

	Obsʳ.	h. m.
		1. 34
		s
Nov. 26	Q	15·65

ν Piscium.

		1. 34
		s
Jan. 2	Q	21·29
Nov. 3	L	21·47
12	Q	21·20
22	Q	21·41

B.A.C. 524.

		1. 35
		s
Jan. 1	L	7·94

109 Piscium.

		1. 37
		s
Nov. 16	Q	30·42

4 Arietis.

		1. 40
		s
Oct. 31	L	48·64
Nov. 10	Q	48·75

B.A.C. 549.

		1. 40
		s
Nov. 26	Q	58·84

1 Arietis. (North star.)

		1. 42
		s
Nov. 14	Q	37·94

B.A.C. 576.

		1. 46
		s
Nov. 29	Q	55·96

β Arietis.

		1. 47
		s
Jan. 2	Q	7·81
5	Q	7·98
Nov. 12	Q	7·92
28	Q	8·02

56 Ceti.

	Obsʳ.	h. m.
		1. 50
		s
Nov. 10	Q	18·02

λ¹ Arietis.

		1. 50
		s
Nov. 22	Q	21·33
26	Q	21·25

B.A.C. 609.

		1. 52
		s
Nov. 14	Q	9·15

ε Trianguli.

		1. 55
		s
Jan. 2	Q	1·53

60 Ceti.

		1. 56
		s
Nov. 29	Q	13·38

61 Ceti.

		1. 56
		s
Nov. 24	Q	50·57
26	Q	50·56

B.A.C. 645.

		1. 59
		s
Nov. 14	Q	0·33

11 Arietis.

		1. 59
		s
Dec. 6	Q	9·50

α Arietis.

	Obsʳ.	h. m.
		1. 59
		s
Nov. 10	Q	30·61
12	Q	30·75
16	Q	30·62
28	Q	30·74

14 Arietis.

		2. 1
		s
Nov. 22	Q	41·22

15 Arietis.

		2. 3
		s
Dec. 16	Q	5·55

19 Arietis.

		2. 5
		s
Nov. 10	Q	39·49

7 Trianguli.

		2. 7
		s
Dec. 6	Q	54·67

21 Arietis.

		2. 8
		s
Nov. 14	Q	0·17

67 Ceti.

		2. 10
		s
Jan. 1	L	12·20
2	Q	12·12
6	L	12·27
8	L	12·33
Nov. 16	Q	12·24
26	Q	12·07

10 Trianguli.

		2. 11
		s
Nov. 29	Q	4·48

23 Arietis.

		2. 11
		s
Nov. 28	Q	35·40

B.A.C. 722.

	Obs^{r}.	h. m.
		2. 12
		s
Nov. 10	Q	50·94

B.A.C. 738.

		2. 16
		s
Nov. 14	Q	53·72
Dec. 6	Q	53·67

W.B. (2) ii. 412.

		2. 18
		s
Dec. 12	Q	14·30

ξ^2 Ceti.

		2. 20
		s
Jan. 2	Q	55·62
Nov. 12	Q	55·82
26	Q	55·78
Dec. 16	Q	55·88

B.A.C. 764.

		2. 22
		s
Nov. 22	Q	19·70

Radcliffe 713.

		2. 22
		s
Jan. 1	L	28·62
1	L	28·54

26 Arietis.

		2. 23
		s
Jan. 8	L	1·10
Nov. 14	Q	1·15

B.A.C. 774.

		2. 24
		s
Dec. 6	Q	7·52

B.A.C. 790.

		2. 27
		s
Dec. 12	Q	53·37

B.A.C. 803.

	Obs^{r}.	h. m.
		2. 30
		s
Dec. 1	L	17·71

81 Ceti.

		2. 30
		s
Jan. 2	Q	50·89
8	L	51·05

δ Ceti.

		2. 32
		s
Jan. 5	Q	30·76
16	Q	30·86
Nov. 14	Q	30·80
22	Q	30·82
Dec. 6	Q	30·77
16	Q	30·81

B.A.C. 834.

		2. 35
		s
Nov. 26	Q	58·04

γ Ceti.

		2. 36
		s
Jan. 6	L	15·31
Dec. 12	Q	15·42
16	Q	15·41

o Arietis.

		2. 37
		s
Jan. 1	L	3·65

B.A.C. 855.

		2. 38
		s
Dec. 1	L	38·39

B.A.C. 866.

		2. 40
		s
Dec. 6	Q	51·58

π Arietis.

	Obs^{r}.	h. m.
		2. 41
		s
Jan. 16	Q	42·49
Nov. 22	Q	42·57
28	Q	42·31

σ Arietis.

		2. 43
		s
Jan. 2	Q	59·26
5	Q	59·36
Dec. 12	Q	59·16

B.A.C. 891.
(1st star.)

		2. 45
		s
Jan. 1	L	28·20

B.A.C. 891.
(2nd star.)

		2. 45
		s
Jan. 1	L	28·29

ρ^1 Arietis.

		2. 47
		s
Nov. 29	Q	18·19

ρ^2 Arietis.

		2. 48
		s
Dec. 16	Q	10·25

ϵ Arietis.

		2. 51
		s
Jan. 16	Q	26·49

50 Arietis.

		2. 52
		s
Dec. 1	L	53·35

α Ceti.

		2. 55
		s
Jan. 5	Q	10·22
21	Q	10·34
Nov. 30	Q	10·36
Dec. 16	Q	10·28

52 Arietis.

	Obs^{r}.	h. m.
		2. 57
		s
Dec. 12	Q	28·48

55 Arietis.

		3. 1
		s
Nov. 22	Q	26·31

B.A.C. 980.

		3. 2
		s
Nov. 26	Q	22·74

δ Arietis.

		3. 3
		s
Jan. 5	Q	51·40
16	Q	51·45
21	Q	51·39
Nov. 29	Q	51·49
Dec. 1	Q	51·41

ζ Arietis.

		3. 7
		s
Dec. 12	Q	5·31

B.A.C. 1005.

		3. 7
		s
Nov. 30	Q	57·78

B.A.C. 1012.

		3. 9
		s
Jan. 1	L	9·51

59 Arietis.

		3. 11
		s
Jan. 29	L	49·00
Nov. 26	Q	48·79

B.A.C. 1032.

		3. 13
		s
Jan. 4	L	2·72
Dec. 6	Q	2·67

τ^1 Arietis.

	Obs^r.	h. m.
		3. 13
		s
Jan. 5	Q	22·79
16	Q	22·83
21	Q	22·77
Nov. 28	Q	22·75

B.A.C. 1054.

		3. 16
		s
Jan. 1	L	25·69

65 Arietis.

		3. 16
		s
Jan. 6	L	35·87

o Tauri.

		3. 17
		s
Jan. 8	L	29·79
29	L	30·02
Nov. 30	L	29·85

B.A.C. 1064.

		3. 19
		s
Nov. 26	Q	17·74
Dec. 12	Q	17·69

B.A.C. 1079.

		3. 22
		s
Jan. 16	Q	2·21
Dec. 6	Q	2·26

f Tauri.

		3. 23
		s
Jan. 1	L	22·10
29	L	22·15
Feb. 3	L	22·02

ϵ Eridani.

		3. 26
		s
Jan. 2	Q	31·34
21	Q	31·47
Feb. 3	L	31·66
Nov. 30	Q	31·50

B.A.C. 1102.

	Obs^r.	h. m.
		3. 27
		s
Jan. 4	L	31·46
6	L	31·52

B.A.C. 1109.

		3. 29
		s
Dec. 1	L	6·56

B.A.C. 1114.

		3. 30
		s
Jan. 29	L	10·26
Dec. 6	Q	10·13

11 Tauri.

		3. 32
		s
Feb. 4	Q	39·15

B.A.C. 1130.

		3. 33
		s
Jan. 2	Q	8·27

δ Eridani.

		3. 36
		s
Jan. 16	Q	44·01
21	Q	44·06
30	Q	44·07
Feb. 4	Q	44·15
Nov. 29	Q	44·08
Dec. 6	Q	43·97

24 Eridani.

		3. 37
		s
Jan. 29	L	36·48
Dec. 1	L	36·15

η Tauri.

		3. 39
		s
Jan. 30	Q	24·31
Nov. 30	Q	24·24
Dec. 12	Q	24·29

B.A.C. 1170.

	Obs^r.	h. m.
		3. 40
		s
Feb. 4	Q	18·20

B.A.C. 1179.

		3. 40
		s
Jan. 2	Q	54·77

B.A.C. 1186.

		3. 41
		s
Jan. 8	L	39·61

B.A.C. 1193.

		3. 42
		s
Jan. 29	L	25·11

B.A.C. 1194.

		3. 42
		s
Dec. 1	L	26·56

B.A.C. 1206.

		3. 45
		s
Jan. 1	L	23·66
30	Q	23·59

B.A.C. 1226.

		3. 49
		s
Feb. 4	Q	47·62
9	Q	47·59

γ Eridani.

		3. 51
		s
Jan. 25	L	41·29

B.A.C. 1239.

		3. 52
		s
Jan. 1	L	51·16

36 Tauri.

		3. 56
		s
Jan. 30	Q	13·92
Dec. 12	Q	13·82

40 Tauri.

	Obs^r.	h. m.
		3. 56
		s
Jan. 1	L	32·28

ψ Tauri.

		3. 58
		s
Feb. 4	Q	36·19

Lalande 7655.

		4. 0
		s
Nov. 29	Q	26·36

ω^1 Tauri.

		4. 1
		s
Jan. 25	L	14·64
Feb. 9	Q	14·73
18	Q	14·70
Dec. 1	L	14·70

B.A.C. 1281.

		4. 3
		s
Jan. 30	Q	17·92

c^1 Eridani.

		4. 5
		s
Jan. 2	Q	13·74
25	L	13·76
Feb. 4	Q	13·61
Nov. 30	Q	13·65

B.A.C. 1295.

		4. 6
		s
Feb. 9	Q	8·54
Dec. 1	L	8·92

W.B. (1) iv. 180.

		4. 10
		s
Feb. 4	Q	12·81
16	Q	12·87
Nov. 29	Q	12·82

Lalande 8048.

	Obsr.	h. m.
		4. 10
		s
Nov. 28	Q	40·36

56 Tauri.

		4. 11
		s
Jan. 29	L	33·99
Feb. 9	Q	33·91

γ Tauri.

		4. 12
		s
Jan. 25	L	3·21
30	Q	3·41
Feb. 18	Q	3·37
Dec. 8	Q	3·48

B.A.C. 1340.

		4. 14
		s
Jan. 1	L	1·51

δ¹ Tauri.

		4. 15
		s
Feb. 15	L	5·83

ξ Eridani.

		4. 16
		s
Jan. 30	Q	54·50

κ¹ Tauri.

		4. 17
		s
Jan. 29	L	15·93

υ¹ Tauri.

		4. 18
		s
Nov. 28	Q	10·31
29	Q	10·47
30	Q	10·47
Dec. 12	Q	10·41

υ² Tauri.

	Obsr.	h. m.
		4. 19
		s
Feb. 9	Q	9·76
16	Q	9·58

ε Tauri.

		4. 20
		s
Jan. 1	L	40·74
16	Q	40·64
Dec. 12	Q	40·73

44 Eridani.

		4. 21
		s
Jan. 21	Q	30·46
Feb. 4	Q	30·38

B.A.C. 1406.

		4. 25
		s
Jan. 30	Q	51·32
Feb. 16	Q	51·30

46 Eridani.

		4. 27
		s
Jan. 2	Q	17·22

B.A.C. 1418.

		4. 27
		s
Jan. 1	L	37·33

Aldebaran.

		4. 28
		s
Feb. 9	Q	7·21
Dec. 12	Q	7·23

B.A.C. 1423.

		4. 28
		s
Feb. 4	Q	36·40

B.A.C. 1427.

		4. 29
		s
Jan. 29	L	15·13

B.A.C. 1443.

	Obsr.	h. m.
		4. 32
		s
Feb. 9	Q	32·98
16	Q	33·04

τ Tauri.

		4. 34
		s
Dec. 8	Q	5·07

B.A.C. 1452.

		4. 35
		s
Jan. 2	Q	1·02
30	Q	1·04

55 Eridani.
(1st star.)

		4. 37
		s
Feb. 17	L	3·16

55 Eridani.
(2nd star.)

		4. 37
		s
Feb. 17	L	3·68

μ Eridani.

		4. 38
		s
Jan. 29	L	42·20
Feb. 4	Q	42·27
Mar. 1	Q	42·12

B.A.C. 1475.

		4. 40
		s
Feb. 16	Q	31·44

B.A.C. 1482.

		4. 41
		s
Jan. 1	L	0·28

59 Eridani.

		4. 42
		s
Jan. 2	Q	25·52

B.A.C. 1488.

	Obsr.	h. m.
		4. 42
		s
Feb. 4	Q	31·10

2 Aurigæ.

		4. 43
		s
Feb. 23	Q	32·07

B.A.C. 1497.

		4. 44
		s
Jan. 30	Q	17·61
Feb. 9	Q	17·65

B.A.C. 1505.

		4. 46
		s
Feb. 17	L	11·83

5 Orionis.

		4. 46
		s
Jan. 6	L	17·35

B.A.C. 1517.

		4. 47
		s
Feb. 16	Q	30·15

ι Aurigæ.

		4. 48
		s
Mar. 1	Q	8·60
Dec. 12	Q	8·34

B.A.C. 1526.

		4. 49
		s
Feb. 18	Q	31·35

99 Tauri.

		4. 49
		s
Nov. 28	Q	33·62
30	Q	33·59

B.A.C. 1537.

		4. 51
		s
Feb. 17	L	16·63

ι Tauri.

	Obsr.	h. m.
		4. 54 s
Jan. 30	Q	58·15
Feb. 9	Q	58·10
16	Q	58·17
23	Q	58·23

B.A.C. 1555.

		4. 56 s
Mar. 1	Q	15·40

B.A.C. 1564.

		4. 57 s
Feb. 13	Q	13·83
18	Q	13·85

B.A.C. 1563.

		4. 57 s
Dec. 12	Q	31·08

m Tauri.

		4. 59 s
Feb. 16	Q	24·79

ε Leporis.

		4. 59 s
Feb. 23	Q	42·36
Dec. 8	Q	42·27

B.A.C. 1578.

		4. 59 s
Feb. 17	L	45·04

66 Eridani.

		5. 0 s
Jan. 6	L	2·56

B.A.C. 1594.

		5. 2 s
Mar. 1	Q	30·71

B.A.C. 1601.

	Obsr.	h. m.
		5. 3 s
Jan. 2	Q	52·95
29	L	52·66
Feb. 10	L	53·15

Capella.

		5. 6 s
Feb. 23	Q	38·99

108 Tauri.

		5. 7 s
Jan. 30	Q	17·26

Rigel.

		5. 8 s
Feb. 9	Q	0·16
13	Q	0·25
18	Q	0·27

18 Orionis.

		5. 8 s
Feb. 17	L	31·05

18 Aurigæ.

		5. 10 s
Feb. 16	Q	25·64

B.A.C. 1643.

		5. 11 s
Jan. 6	L	(25·82)
Feb. 13	Q	25·41

B.A.C. 1647.

		5. 12 s
Feb. 9	Q	17·11

B.A.C. 1651.

		5. 12 s
Jan. 30	Q	54·67
Feb. 17	L	54·85

ν Leporis.

	Obsr.	h. m.
		5. 13 s
Jan. 29	L	40·40

B.A.C. 1655.

		5. 13 s
Jan. 1	L	58·55

B.A.C. 1656.

		5. 14 s
Mar. 1	Q	19·37

σ Aurigæ.

		5. 15 s
Feb. 23	Q	24·69

110 Tauri.

		5. 15 s
Jan. 2	Q	46·37

8 Leporis.

		5. 17 s
Jan. 6	L	17·17

ψ^1 Orionis.

		5. 17 s
Feb. 17	L	41·47

β Tauri.

		5. 17 s
Feb. 16	Q	41·80

113 Tauri.

		5. 18 s
Dec. 12	Q	14·26

115 Tauri.

		5. 19 s
Jan. 29	L	14·40

B.A.C. 1699.

	Obsr.	h. m.
		5. 19 s
Jan. 1	L	41·30
Mar. 4	L	40·91

B.A.C. 1711.

		5. 22 s
Feb. 16	Q	9·98

B.A.C. 1714.

		5. 22 s
Feb. 9	Q	30·85

n^1 Orionis. (1st star.)

		5. 24 s
Jan. 29	L	6·50

B.A.C. 1728. (1st star.)

		5. 24 s
Feb. 17	L	21·37

B.A.C. 1728. (2nd star.)

		5. 24 s
Feb. 17	L	21·81

δ Orionis.

		5. 25 s
Jan. 6	L	3·59
30	Q	3·48
Feb. 18	Q	3·59
23	Q	3·47
Mar. 1	Q	3·76
4	L	3·56

10 Leporis.

		5. 25 s
Jan. 2	Q	18·55

α Leporis.

	Obsr.	h. m.
		5. 26
		s
Jan. 1	L	43·73
Feb. 13	Q	43·99
18	Q	43·95
23	Q	43·95
Mar. 1	Q	44·02

ψ² Orionis.

		5. 27
		s
Feb. 4	Q	7·26
Mar. 4	L	(7·70)

ε Orionis.

		5. 29
		s
Mar. 10	Q	18·99

ζ Tauri.

		5. 29
		s
Apr. 11	L	31·18
Dec. 12	Q	31·01

B.A.C. 1783.

		5. 31
		s
Feb. 17	L	54·45

B.A.C. 1787.

		5. 32
		s
Feb. 13	Q	26·10

B.A.C. 1789.

		5. 32
		s
Jan. 6	L	44·95
Feb. 9	Q	44·85

126 Tauri.

		5. 33
		s
Mar. 12	Q	26·16

B.A.C. 1793.

		5. 33
		s
Mar. 4	L	51·00

α Columbæ.

	Obsr.	h. m.
		5. 34
		s
Mar. 10	Q	43·40

Rümker 1530.

		5. 34
		s
Feb. 4	Q	48·71

127 Tauri.

		5. 34
		s
Jan. 30	Q	53·71

B.A.C. 1811.

		5. 37
		s
Dec. 12	Q	12·31

B.A.C. 1826.

		5. 39
		s
Feb. 18	Q	24·24
23	Q	24·02
Mar. 4	L	24·42

131 Tauri.

		5. 39
		s
Feb. 17	L	28·55

B.A.C. 1831.

		5. 39
		s
Mar. 1	Q	34·05

κ Orionis.

		5. 41
		s
Feb. 9	Q	18·31
13	Q	18·26
16	Q	18·38
Mar. 12	Q	18·50

υ Aurigæ.

		5. 41
		s
Jan. 30	Q	45·81

55 Orionis.

	Obsr.	h. m.
		5. 44
		s
Jan. 29	L	(48·38)
Feb. 9	Q	47·92

56 Orionis.

		5. 45
		s
Jan. 2	Q	22·67
Feb. 4	Q	22·81

χ¹ Orionis.

		5. 46
		s
Dec. 12	Q	19·71

χ² Orionis.

		5. 46
		s
Jan. 1	L	53·75

α Orionis.

		5. 47
		s
Feb. 13	Q	48·56
16	Q	48·58
23	Q	48·55
Mar. 10	Q	48·57
12	Q	48·57

B.A.C. 1882.

		5. 47
		s
Mar. 4	L	55·63

B.A.C. 1893.

		5. 48
		s
Jan. 30	Q	59·64
Feb. 18	Q	59·72

60 Orionis.

		5. 51
		s
Jan. 29	L	50·15
Feb. 23	Q	50·08

2 Monocerotis.

	Obsr.	h. m.
		5. 52
		s
Jan. 2	Q	36·87
Feb. 13	Q	36·85

χ³ Orionis.

		5. 55
		s
Feb. 16	Q	24·33
17	L	24·47

1 Geminorum.

		5. 55
		s
Jan. 1	L	51·10
Mar. 10	Q	51·20

63 Orionis.

		5. 57
		s
Jan. 29	L	(43·43)
30	Q	43·05

B.A.C. 1956.

		5. 59
		s
Feb. 9	Q	1·65

ν Orionis.

		5. 59
		s
Feb. 16	Q	48·44
17	L	48·47
Mar. 4	L	48·44

B.A.C. 1961.

		6. 0
		s
Jan. 2	Q	29·95

B.A.C. 1967.

		6. 0
		s
Mar. 1	Q	51·34

19 Leporis.

		6. 1
		s
Feb. 13	Q	46·66

4 Geminorum.

	Obsr.	h. m.
		6. 2
Feb. 18	Q	s 15·01
23	Q	15·00

6 Geminorum.

		6. 4
Mar. 12	Q	s 4·45

B.A.C. 1997.

		6. 5
Feb. 9	Q	s 46·08

η Geminorum.

		6. 6
Mar. 10	Q	s 40·07
17	Q	40·11

k¹ Orionis.

		6. 8
Jan. 30	Q	s 6·63

B.A.C. 2021.

		6. 9
Jan. 2	Q	s 47·72
Mar. 19	Q	47·56

6 Monocerotis.

		6. 11
Mar. 4	L	s 11·97

μ Geminorum.

		6. 14
Mar. 12	Q	s 43·99
16	L	44·02
Apr. 11	L	44·05
12	Q	43·92

B.A.C. 2057.

		6. 16
Mar. 4	L	s 8·91

8 Monocerotis.

	Obsr.	h. m.
		6. 16
Jan. 29	L	s 33·77

B.A.C. 2060.

		6. 16
Jan. 29	L	s 34·31

β Canis Majoris.

		6. 16
Jan. 2	Q	s 42·50

77 Orionis.

		6. 20
Mar. 12	Q	s 14·71
18	L	14·85

10 Monocerotis.

		6. 21
Mar. 4	L	s 14·84

11 Monocerotis. (1st star.)

		6. 22
Mar. 17	Q	s 13·35

19 Geminorum.

		6. 23
Jan. 29	L	s 48·00

20 Geminorum. (1st star.)

		6. 24
Mar. 19	Q	s 21·61

20 Geminorum. (2nd star.)

		6. 24
Mar. 19	Q	s 22·03

12 Monocerotis.

	Obsr.	h. m.
		6. 25
Jan. 2	Q	s 5·99
30	Q	6·18
Feb. 9	Q	5·98

B.A.C. 2130.

		6. 26
Feb. 13	M	s 13·80

22 Geminorum.

		6. 26
Mar. 4	L	s 37·92

14 Monocerotis.

		6. 27
Feb. 8	L	s 24·76
23	Q	24·22
Mar. 18	L	24·86

γ Geminorum.

		6. 29
Feb. 17	L	s 51·11
Mar. 1	Q	51·29
16	L	51·24
17	Q	51·32
Apr. 11	L	51·21

B.A.C. 2173.

		6. 32
Mar. 12	Q	s 0·01

15 Monocerotis.

		6. 33
Feb. 4	Q	s 29·24
Mar. 17	Q	29·22
19	Q	29·13

B.A.C. 2189.

		6. 34
Jan. 2	Q	s 5·73
29	L	(6·25)

Cephei 51 (Hev.)

	Obsr.	h. m.
		6. 35
Aug. 31	L	s 42·21

Sirius.

		6. 39
Mar. 1	Q	s 8·98

11 Canis Majoris.

		6. 40
Jan. 29	L	s 38·91

12 Canis Majoris.

		6. 41
Mar. 12	Q	s 12·08
17	Q	12·01
19	Q	11·98

35 Geminorum.

		6. 42
Mar. 4	L	s 45·12

θ Canis Majoris.

		6. 47
Jan. 29	L	s 52·24
Feb. 8	L	52·17
9	Q	52·30
13	M	52·35
17	L	52·27

B.A.C. 2265.

		6. 48
Feb. 16	Q	s 21·81
Mar. 4	L	22·05

40 Geminorum.

		6. 51
Mar. 17	Q	s 3·97

W.B. (2) vi. 1534.

		6. 51
Feb. 13	M	s 16·48

B.A.C. 2280.

	Obs^r.	h. m.
		6. 52
		s
Mar. 12	Q	1·97

ε Canis Majoris.

		6. 53
		s
Feb. 9	Q	16·78
Mar. 19	Q	16·91

ζ Geminorum.

		6. 56
		s
Feb. 17	L	2·32
Apr. 12	Q	2·44
13	L	2·45

B.A.C. 2306.

		6. 56
		s
Feb. 16	Q	5·87

19 Monocerotis.

		6. 56
		s
Jan. 30	Q	9·64

44 Geminorum.

		6. 57
		s
Feb. 3	L	7·25
Mar. 17	Q	7·06

γ Canis Majoris.

		6. 57
		s
Feb. 8	L	36·34
Mar. 18	L	36·28
24	Q	36·41

Piazzi vi. 329.

		7. 0
		s
Mar. 18	L	14·11

B.A.C. 2329.

		7. 0
		s
Feb. 9	Q	25·74

48 Geminorum.

	Obs^r.	h. m.
		7. 4
		s
Feb. 13	M	10·55
Mar. 12	Q	10·39

B.A.C. 2356.

		7. 4
		s
Mar. 24	Q	36·05

51 Geminorum.

		7. 5
		s
Feb. 3	L	33·56
Mar. 17	Q	33·65
19	Q	33·64

24 Monocerotis.

		7. 8
		s
Mar. 4	L	21·99

B.A.C. 2385.

		7. 8
		s
Mar. 18	L	33·48

B.A.C. 2387.

		7. 8
		s
Feb. 5	L	56·72

B.A.C. 2393.

		7. 9
		s
Feb. 9	Q	21·27

λ Geminorum.

		7. 10
		s
Feb. 17	L	16·47
Mar. 17	Q	16·57
Apr. 12	Q	16·42
13	L	16·65

δ Geminorum.

		7. 11
		s
Mar. 4	L	59·73
Apr. 11	L	60·04

29 Canis Majoris.

	Obs^r.	h. m.
		7. 13
		s
Feb. 13	M	0·73

56 Geminorum.

		7. 13
		s
Feb. 3	L	55·21
Mar. 24	Q	55·26

B.A.C. 2433.

		7. 15
		s
Jan. 29	L	4·93
18	L	4·64

B.A.C. 2432.

		7. 15
		s
Feb. 5	L	10·34

B.A.C. 2437.

		7. 15
		s
Mar. 12	Q	45·03

s Puppis.

		7. 17
		s
Feb. 17	L	48·87

η Canis Minoris.

		7. 20
		s
Feb. 3	L	43·24

δ¹ Canis Minoris.

		7. 25
		s
Feb. 17	L	2·14
Mar. 12	Q	2·03

67 Geminorum.

		7. 25
		s
Mar. 24	Q	39·32

68 Geminorum.

	Obs^r.	h. m.
		7. 25
		s
Feb. 3	L	50·70
Mar. 17	Q	50·76

Castor.

		7. 25
		s
Feb. 13	M	55·03
Apr. 11	L	55·10

δ² Canis Minoris.

		7. 26
		s
Feb. 16	Q	3·65

δ³ Canis Minoris.

		7. 27
		s
Feb. 23	Q	7·77

25 Monocerotis.

		7. 30
		s
Feb. 17	L	31·03

Procyon.

		7. 32
		s
Feb. 13	M	10·93

m Puppis.

		7. 32
		s
Mar. 1	Q	38·35
23	L	38·45

B.A.C. 2538.

		7. 34
		s
Mar. 24	Q	10·05

B.A.C. 2537.

		7. 34
		s
Feb. 3	L	14·20
23	Q	14·20

Pollux.

	Obsr.	h. m.
		7. 36
		s
Apr. 11	L	59·25

79 Geminorum.

		7. 37
		s
Jan. 30	Q	10·15
Feb. 5	L	10·28

B.A.C. 2557.

		7. 37
		s
Mar. 17	Q	11·19

1 Puppis.

		7. 38
		s
Mar. 19	Q	3·00

***g* Geminorum.**

		7. 38
		s
Apr. 13	L	15·17
14	Q	14·81

B.A.C. 2565.

		7. 38
		s
Mar. 23	L	51·34

B.A.C. 2587.

		7. 41
		s
Mar. 1	Q	21·90
12	Q	21·74

5 Puppis.
(1st star.)

		7. 41
		s
Feb. 8	L	34·58
23	Q	34·55

B.A.C. 2600.

		7. 43
		s
Jan. 29	L	23·59

ξ Argûs.

	Obsr.	h. m.
		7. 43
		s
Jan. 30	Q	34·56
Mar. 23	L	34·37
24	Q	34·54

B.A.C. 2605.

		7. 44
		s
Feb. 5	L	2·34

8 Puppis.

		7. 45
		s
Mar. 19	Q	19·29

10 Puppis.

		7. 46
		s
Feb. 3	L	3·51

85 Geminorum.

		7. 47
		s
Jan. 30	Q	43·44
Feb. 23	Q	43·56

14 Canis Minoris.

		7. 51
		s
Jan. 29	L	17·43

B.A.C. 2654.

		7. 51
		s
Mar. 1	Q	59·38
18	L	59·53
23	L	59·39

ω¹ Cancri.

		7. 52
		s
Feb. 13	M	41·95

27 Monocerotis.

		7. 52
		s
Jan. 30	Q	56·46
Feb. 8	L	56·41

12 Puppis.

	Obsr.	h. m.
		7. 53
		s
Feb. 23	Q	15·85
Mar. 30	L	15·77

6 Cancri.

		7. 55
		s
Mar. 4	L	9·67
Apr. 13	L	9·66

B.A.C. 2679.

		7. 55
		s
Feb. 16	Q	48·41

B.A.C. 2683.

		7. 56
		s
Jan. 29	L	53·64

B.A.C. 2706.

		7. 58
		s
Mar. 17	Q	24·20
23	L	24·28

11 Cancri.

		8. 0
		s
Mar. 1	Q	30·24
30	L	30·59

ψ¹ Cancri.

		8. 1
		s
Feb. 23	Q	59·75

B.A.C. 2731.

		8. 2
		s
Jan. 30	Q	14·99
Feb. 8	L	15·31

B.A.C. 2739.

		8. 3
		s
Jan. 29	L	15·49

B.A.C. 2737.

	Obsr.	h. m.
		8. 3
		s
Feb. 13	M	20·23

ζ¹ Cancri.

		8. 4
		s
Mar. 17	Q	24·61
18	L	24·60
Apr. 13	L	24·54
14	Q	24·40

B.A.C. 2748.

		8. 4
		s
Feb. 16	Q	45·47
Mar. 23	L	45·52

β Cancri.

		8. 9
		s
Jan. 29	L	8·16
Feb. 8	L	8·04
13	M	8·28
17	L	8·27
Mar. 23	L	8·03
30	L	8·16
Apr. 13	L	8·51

B.A.C. 2782.

		8. 10
		s
Jan. 30	Q	9·71
Feb. 3	L	9·75

B.A.C. 2791.

		8. 12
		s
Feb. 13	M	40·70
Mar. 17	Q	40·77

***d*¹ Cancri.**

		8. 15
		s
Feb. 3	L	34·32
8	L	34·69
9	Q	34·52
16	Q	34·37
Mar. 12	Q	34·43

Star	Date	Obsʳ.	h. m.	s
Piazzi viii. 48.	Jan. 29	L	8. 15	57·26
W.B. (1) viii. 425.	Jan. 30	Q	8. 17	8·95
B.A.C. 2822.	Mar. 18	L	8. 18	36·71
	24	Q		36·92
	Apr. 13	L		37·18
B.A.C. 2839.	Mar. 23	L	8. 21	14·74
B.A.C. 2841.	Feb. 16	Q	8. 21	39·23
B.A.C. 2843.	Jan. 29	L	8. 21	48·86
W.B. (2) viii. 523.	Feb. 3	L	8. 23	12·59
	Mar. 30	L		12·48
η Cancri.	Feb. 9	Q	8. 24	50·43
	Mar. 17	Q		50·37
	18	L		50·36
	Apr. 2	Q		50·37
	13	L		50·46
B.A.C. 2868.	Jan. 30	Q	8. 25	24·32
B.A.C. 2872.	Feb. 13	M	8. 26	12·89
	23	Q		12·92
35 Cancri.	Mar. 1	Q	8. 27	30·21
	Apr. 13	L		30·30
B.A.C. 2888.	Feb. 3	L	8. 28	30·02
	Mar. 12	Q		29·93
	23	L		30·24
c^1 Cancri.	Apr. 2	Q	8. 29	43·30
c^2 Cancri.	Mar. 30	L	8. 30	43·15
B.A.C. 2907.	Mar. 4	L	8. 31	20·77
g Mali.	Jan. 30	Q	8. 32	3·69
	Feb. 9	Q		3·59
	23	Q		3·76
40 Cancri.	Apr. 14	Q	8. 32	21·97
B.A.C. 2925.	Mar. 4	L	8. 33	8·39
6 Hydræ.	Feb. 8	L	8. 33	34·72
f Mali.	Feb. 3	L	8. 34	4·06
	Mar. 1	Q		3·94
δ Cancri.	Apr. 14	Q	8. 36	57·13
10 Hydræ.	Mar. 30	L	8. 37	49·20
ε Hydræ.	Mar. 24	Q	8. 39	34·22
12 Hydræ.	Mar. 12	Q	8. 39	56·94
	23	L		57·02
B.A.C. 2977.	Feb. 9	Q	8. 41	10·62
	17	L		10·90
14 Hydræ.	Apr. 2	Q	8. 42	31·69
B.A.C. 2990.	Feb. 23	Q	8. 42	57·93
	Mar. 4	L		58·15
54 Cancri.	Feb. 8	L	8. 43	26·87
	Mar. 29	Q		26·84
B.A.C. 3005.	Mar. 30	L	8. 44	20·38
B.A.C. 3029.	Mar. 12	Q	8. 47	42·94
	16	L		43·05
	24	Q		42·93
B.A.C. 3039. (South star.)	Feb. 9	Q	8. 48	49·34
	17	L		49·76
	23	Q		49·54
B.A.C. 3039. (North star.)	Feb. 17	L	8. 48	49·81
	23	Q		49·62
α Cancri.	Mar. 18	L	8. 51	2·65
	19	Q		2·81
	29	Q		2·68
	Apr. 2	Q		2·70
68 Cancri.	Feb. 8	L	8. 54	5·48
	Mar. 16	L		5·59
71 Cancri.	Feb. 23	Q	8. 58	7·32

B.A.C. 3103.

	Obs^r.	h. m. 8. 58 s
Feb. 9	Q	37·82
Mar. 12	Q	37·96
23	L	38·30

ω Hydræ.

		8. 58 s
Mar. 24	Q	48·51
Apr. 13	L	48·78

κ Cancri.

		9. 0 s
Feb. 8	L	22·77
17	L	22·62
Mar. 4	L	22·86
16	L	22·67
18	L	22·76
19	Q	22·66
29	Q	22·76

19 Hydræ.

		9. 2 s
Apr. 2	Q	2·80

20 Hydræ.

		9. 2 s
Mar. 16	L	56·51

e Mali.

		9. 4 s
Feb. 9	Q	10·57
23	Q	10·66

B.A.C. 3133.

		9. 5 s
Mar. 30	L	6·71
Apr. 13	L	6·73

B.A.C. 3164.

		9. 10 s
Mar. 12	Q	28·41
Apr. 14	Q	28·39

25 Hydræ.

	Obs^r.	h. m. 9. 10 s
Feb. 23	Q	56·56
Mar. 16	L	56·65

83 Cancri.

		9. 11 s
Mar. 24	Q	23·26
29	Q	23·14
30	L	23·46
Apr. 2	Q	23·34

B.A.C. 3176.

		9. 12 s
Mar. 17	Q	11·59

B.A.C. 3185.

		9. 13 s
Mar. 19	Q	42·64

B.A.C. 3202.

		9. 16 s
Mar. 12	Q	15·13

B.A.C. 3203.

		9. 16 s
Feb. 23	Q	30·69

A Hydræ.

		9. 18 s
Mar. 17	Q	35·91

B.A.C. 3224.

		9. 20 s
Feb. 23	Q	49·19

B.A.C. 3243.

		9. 23 s
Apr. 14	Q	39·08

τ^2 Hydræ.

	Obs^r.	h. m. 9. 25 s
Mar. 17	Q	2·72

B.A.C. 3273.

		9. 28 s
Mar. 29	Q	38·08
Apr. 2	Q	38·19

10 Leonis.

		9. 30 s
Apr. 14	Q	1·71

11 Leonis.

		9. 30 s
Feb. 23	Q	35·83

B.A.C. 3292.

		9. 31 s
Mar. 1	Q	16·54

B.A.C. 3296.

		9. 31 s
Mar. 17	Q	18·51

ο Leonis.

		9. 33 s
Mar. 11	L	53·30
Apr. 1	L	53·27

B.A.C. 3318.

		9. 35 s
Feb. 23	Q	45·51

ε Leonis.

		9. 38 s
Mar. 29	Q	7·50
Apr. 2	Q	7·52
14	Q	7·52

θ Antliæ.

		9. 38 s
Mar. 11	L	8·51
19	Q	8·60

B.A.C. 3340.

	Obs^r.	h. m. 9. 39 s
Mar. 17	Q	23·12
Apr. 1	L	23·42

B.A.C. 3343.

		9. 40 s
Mar. 1	Q	5·50

20 Leonis.

		9. 42 s
Feb. 23	Q	13·13
Mar. 4	L	13·43

B.A.C. 3356.

		9. 42 s
Apr. 14	Q	33·33
18	L	33·54

21 Leonis.

		9. 43 s
Mar. 11	L	30·24
Apr. 2	Q	30·09

8 Sextantis.

		9. 45 s
Mar. 17	Q	46·51
19	Q	46·49

Radcliffe 2404.

		9. 46 s
Apr. 1	L	17·08

B.A.C. 3386.

		9. 47 s
Mar. 1	Q	0·00

B.A.C. 3391.

		9. 48 s
Feb. 23	Q	2·57

26 Leonis.

	Obsr.	h. m. / s
		9. 50
Mar. 4	L	47·97
Apr. 18	L	48·02

Radcliffe 2407.

		9. 51
Apr. 13	L	15·40

B.A.C. 3409.

		9. 51
Apr. 14	Q	45·21

π Leonis.

		9. 53
Mar. 11	L	1·40
17	Q	1·38
19	Q	1·40
23	L	1·59
29	Q	1·42
30	L	1·39
Apr. 1	L	1·65
2	Q	1·43
20	L	1·37

B.A.C. 3423.

		9. 55
Mar. 1	Q	13·73
Apr. 19	Q	13·66

B.A.C. 3428.

		9. 55
Feb. 23	Q	57·75

B.A.C. 3434.

		9. 56
Mar. 11	L	51·58
17	Q	51·24

B.A.C. 3438.

		9. 57
Mar. 4	L	41·73

A Leonis.

	Obsr.	h. m. / s
		10. 0
Mar. 19	Q	40·96
20	L	41·11

Regulus.

		10. 1
Feb. 23	Q	7·57
Apr. 14	Q	7·70
21	Q	7·67
May 13	L	7·50

16 Sextantis.

		10. 2
Mar. 11	L	7·36
Apr. 18	L	7·41

33 Leonis.

		10. 3
Mar. 17	Q	21·40
29	Q	21·23

B.A.C. 3471.

		10. 3
Feb. 23	Q	28·30
Mar. 1	Q	28·19
Apr. 13	L	28·16

18 Sextantis.

		10. 4
Apr. 2	Q	10·12

W.B. (2) x. 90–1.

		10. 5
Apr. 19	Q	25·44
21	Q	25·38

21 Sextantis.

		10. 7
Apr. 1	L	22·05
20	Q	21·94

B.A.C. 3506.

	Obsr.	h. m. / s
		10. 8
Feb. 23	Q	51·45

Groombridge 1620.

		10. 9
Apr. 14	Q	20·12

22 Sextantis.

		10. 10
Mar. 11	L	52·38
24	Q	52·30

B.A.C. 3521.

		10. 11
Mar. 17	Q	53·77
29	Q	53·66
Apr. 22	L	53·86

γ^1 Leonis.

		10. 12
Mar. 1	Q	28·18
Apr. 1	L	28·13
18	L	28·03
May 13	L	28·19

B.A.C. 3538.

		10. 15
Apr. 12	Q	3·75
18	L	3·94

B.A.C. 3540.

		10. 15
Mar. 19	Q	6·12

26 Leonis Minoris.

		10. 15
Apr. 19	Q	12·44

27 Leonis Minoris.

		10. 15
Apr. 21	Q	15·78

B.A.C. 3553.

	Obsr.	h. m. / s
		10. 16
Apr. 2	Q	39·36
22	L	39·47

B.A.C. 3562.

		10. 18
Mar. 1	Q	25·25

μ Hydræ.

		10. 19
Apr. 19	Q	30·75

27 Sextantis.

		10. 19
Mar. 17	Q	54·58
Apr. 20	L	54·86

B.A.C. 3582.

		10. 21
Mar. 24	Q	50·30
Apr. 22	L	50·53

B.A.C. 3583.

		10. 21
Apr. 23	Q	59·99

B.A.C. 3592.

		10. 22
Mar. 29	Q	43·22

δ Antliæ.

		10. 23
Apr. 21	Q	19·86

Radcliffe 2507.

		10. 25
Apr. 12	Q	27·04

ρ Leonis.

		10. 25
Apr. 29	L	38·86

ϕ^1 Hydræ.

	Obs^r.	h. m. 10. 26 s
Mar. 17	Q	4·26

44 Hydræ.

		10. 27 s
Mar. 1	Q	32·99
Apr. 29	L	33·26

49 Leonis.

		10. 27 s
Apr. 19	Q	53·86

B.A.C. 3637.

		10. 30 s
Apr. 21	Q	50·34
22	L	50·33

50 Leonis.

		10. 31 s
Apr. 23	Q	36·81

B.A.C. 3649.

		10. 32 s
Mar. 24	Q	34·48

B.A.C. 3661.

		10. 34 s
Mar. 17	Q	33·58

34 Sextantis.

		10. 35 s
Mar. 11	L	36·17
16	L	36·04
18	L	36·20
Apr. 18	L	36·18
19	Q	36·05
22	L	(36·42)

Piazzi x. 140.

		10. 36 s
Apr. 29	L	6·72

36 Sextantis.

	Obs^r.	h. m. 10. 38 s
Mar. 20	L	9·18
Apr. 21	Q	8·99

B.A.C. 3698.

		10. 40 s
Apr. 13	L	15·43

43 Leonis Minoris.

		10. 41 s
Apr. 2	Q	26·77

*** N.P.D. 98° 1′.**

		10. 41 s
Mar. 17	Q	58·95

***l* Leonis.**

		10. 42 s
Mar. 24	Q	6·32
Apr. 12	Q	6·44
20	L	6·20
23	Q	6·41

39 Sextantis.

		10. 42 s
Apr. 29	L	9·46

40 Sextantis. (North star.)

		10. 42 s
Mar. 16	L	23·77
Apr. 18	L	23·90

40 Sextantis. (South star.)

		10. 42 s
Mar. 16	L	23·77
Apr. 18	L	23·92

41 Sextantis.

	Obs^r.	h. m. 10. 43 s
Mar. 29	Q	28·56
30	L	28·68

b^2 Hydræ.

		10. 44 s
Mar. 11	L	27·05

B.A.C. 3726.

		10. 45 s
Mar. 23	L	14·59

45 Leonis Minoris.

		10. 45 s
Apr. 21	Q	22·38

48 Leonis Minoris.

		10. 47 s
Apr. 23	Q	18·77
30	Q	18·69

B.A.C. 3737.

		10. 47 s
Mar. 24	Q	41·90
Apr. 12	Q	41·92

49 Leonis Minoris.

		10. 48 s
Apr. 19	Q	40·91
20	Q	41·14

57 Leonis.

		10. 49 s
Mar. 16	L	12·07

B.A.C. 3759.

		10. 52 s
Mar. 17	Q	26·50
23	L	26·88

***d* Leonis.**

	Obs^r.	h. m. 10. 53 s
Mar. 11	L	32·15
12	Q	32·01
16	L	32·06
30	L	32·14
Apr. 1	L	32·08
May 14	Q	32·12

Lalande 21127.

		10. 53 s
Apr. 21	Q	36·60
22	L	36·93

B.A.C. 3774.

		10. 54 s
Apr. 13	L	13·83
20	L	13·87

α Ursæ Majoris.

		10. 55 s
Sept. 29	Q	18·74
30	L	18·93
Oct. 5	Q	18·37

p^2 Leonis.

		10. 56 s
Apr. 25	L	39·02

B.A.C. 3785.

		10. 56 s
Mar. 11	L	58·25

B.A.C. 3786.

		10. 57 s
Mar. 29	Q	22·03
Apr. 1	L	22·16

χ Leonis.

	Obsr.	h. m.
		10. 57
		s
Mar. 23	L	60·15
Apr. 12	Q	60·03
19	Q	60·07
23	Q	59·99

B.A.C. 3795.

		10. 59
		s
Mar. 12	Q	35·67
16	L	36·12
18	L	36·12
30	L	36·13

52 Leonis Minoris.

		10. 59
		s
Mar. 24	Q	45·86
Apr. 20	L	46·22

***p*³ Leonis.**

		10. 59
		s
Mar. 17	Q	57·89
Apr. 18	L	57·86

B.A.C. 3799.

		11. 0
		s
Apr. 13	L	5·47
22	L	5·84

B.A.C. 3808.

		11. 1
		s
May 7	Q	29·41

B.A.C. 3811.

		11. 1
		s
Apr. 19	Q	49·67
21	Q	49·82

***p*⁴ Leonis.**

		11. 2
		s
Mar. 11	L	17·28
Apr. 1	L	17·30

B.A.C. 3823.

	Obsr.	h. m.
		11. 3
		s
Mar. 23	L	25·17
Apr. 23	Q	24·81

B.A.C. 3824.

		11. 4
		s
Apr. 12	Q	35·55

B.A.C. 3828.

		11. 5
		s
Apr. 29	L	21·78

δ Leonis.

		11. 6
		s
May 14	Q	52·36

W.B. (1) xi. 100.

		11. 7
		s
Mar. 12	Q	35·32
Apr. 20	L	35·59

B.A.C. 3844.

		11. 8
		s
Apr. 19	Q	49·93
20	L	49·93

B.A.C. 3845.

		11. 8
		s
Mar. 18	L	51·61

φ Leonis.

		11. 9
		s
Apr. 18	L	44·90

W.B. (1) xi. 148.

		11. 10
		s
Mar. 16	L	4·76

W.B. (1) xi. 161.

	Obsr.	h. m.
		11. 10
		s
Mar. 17	Q	36·58

B.A.C. 3854.

		11. 11
		s
Mar. 24	Q	15·10
Apr. 25	L	15·38

76 Leonis.

		11. 11
		s
Mar. 11	L	56·28

δ Crateris.

		11. 12
		s
Apr. 1	L	32·41
2	Q	32·58
21	Q	32·59
23	Q	32·53
29	L	32·78
May 7	Q	32·66
14	Q	32·60

71 Leonis.

		11. 15
		s
Mar. 19	Q	21·76
23	L	22·14
Apr. 21	Q	21·89

B.A.C. 3871.

		11. 16
		s
Apr. 12	Q	13·49
14	Q	13·50
May 7	Q	13·58

B.A.C. 3873.

		11. 16
		s
Apr. 23	Q	19·96

B.A.C. 3884.

		11. 18
		s
Mar. 12	Q	10·17
Apr. 25	L	10·23

81 Leonis.

	Obsr.	h. m.
		11. 18
		s
Apr. 19	Q	30·59
29	L	31·08

82 Leonis.

		11. 18
		s
Apr. 1	L	40·03

Piazzi xi. 66.

		11. 18
		s
Mar. 17	Q	41·12
18	L	(41·73)

τ Leonis.

		11. 20
		s
Mar. 23	L	56·66
Apr. 20	L	56·42
May 14	Q	56·44

B.A.C. 3909.

		11. 22
		s
Mar. 30	L	27·13

85 Leonis.

		11. 22
		s
May 7	Q	36·50

B.A.C. 3926.

		11. 26
		s
Apr. 14	Q	10·91
19	Q	10·77

B.A.C. 3937.

		11. 29
		s
Mar. 16	L	8·21

B.A.C. 3940.

		11. 29
		s
Mar. 17	Q	34·73
19	Q	34·73
24	Q	34·63

υ Leonis.

	Obsr.	h. m. 11. 29 s
May 7	Q	59·11

B.A.C. 3948.

		11. 30 s
Mar. 30	L	16·93

B.A.C. 3947.

		11. 30 s
Apr. 22	L	17·91

ω Virginis.

		11. 31 s
Mar. 18	L	26·64

B.A.C. 3962.

		11. 33 s
Apr. 18	L	25·91

B.A.C. 3970.

		11. 35 s
Mar. 17	Q	2·21
Apr. 13	L	2·28
25	L	2·46

B.A.C. 3971.

		11. 35 s
Apr. 1	L	10·05
19	Q	10·00

B.A.C. 3975.

		11. 36 s
Mar. 24	Q	58·40

β Leonis.

		11. 42 s
Apr. 14	Q	7·19
May 7	Q	7·17
14	Q	7·24
June 10	Q	7·24

B.A.C. 3996.

	Obsr.	h. m. 11. 42 s
Apr. 1	L	8·96

β Virginis.

		11. 43 s
Apr. 18	L	36·67
19	Q	36·65

B.A.C. 4003.

		11. 43 s
Apr. 13	L	45·39

B.A.C. 4005.

		11. 43 s
Mar. 24	Q	56·30
30	L	56·57
Apr. 25	L	56·46

B.A.C. 4014.

		11. 45 s
Apr. 12	Q	45·60

γ Ursæ Majoris.

		11. 46 s
Apr. 14	Q	39·61
Sept. 29	Q	40·05
30	L	39·87
Oct. 4	Q	40·00
5	Q	39·42

B.A.C. 4019.

		11. 46 s
May 7	Q	52·37

A² Virginis.

		11. 48 s
Mar. 23	L	4·75

B.A.C. 4029.

		11. 48 s
Apr. 1	L	26·57

B.A.C. 4032.

	Obsr.	h. m. 11. 48 s
Mar. 30	L	45·43
Apr. 20	L	45·67

B.A.C. 4042.

		11. 51 s
Apr. 19	Q	58·58

31 Crateris.

		11. 53 s
Mar. 24	Q	54·00

π Virginis.

		11. 53 s
Mar. 30	L	54·17
Apr. 13	L	54·19
14	Q	54·26
May 17	M	54·17

1 Comæ.

		11. 54 s
Mar. 29	Q	46·14

2 Comæ.

		11. 57 s
Apr. 12	Q	18·38
21	Q	18·73

B.A.C. 4069.

		11. 57 s
Mar. 23	L	(45·78)
May 7	Q	45·27

B.A.C. 4077.

		11. 59 s
Apr. 14	Q	2·04
22	L	2·39

B.A.C. 4083.

		12. 1 s
Mar. 24	Q	2·76
Apr. 13	L	3·01

10 Virginis.

	Obsr.	h. m. 12. 2 s
Apr. 18	L	43·34
19	Q	43·17

ε Corvi.

		12. 3 s
May 17	M	8·04
18	Q	8·04

3 Comæ.

		12. 3 s
Mar. 23	L	35·93
29	Q	35·56

12 Virginis.

		12. 6 s
Apr. 13	L	30·63

B.A.C. 4116.

		12. 6 s
Mar. 24	Q	58·78
Apr. 25	L	59·17
28	Q	59·14

Lalande 23040.

		12. 11 s
Apr. 12	Q	10·22

B.A.C. 4134. (1st star.)

		12. 11 s
Apr. 14	Q	10·68

B.A.C. 4134. (2nd star.)

		12. 11 s
Apr. 14	Q	11·10

B.A.C. 4136.

	Obsr.	h. m. 12. 11 s
Mar. 30	L	32·88
May 18	Q	32·63

13 Virginis.

		12. 11 s
Mar. 23	L	42·36

W.B. (1) xii. 172.

		12. 12 s
Apr. 13	L	0·13

14 Virginis.

		12. 12 s
Mar. 29	Q	20·34

{ B.A.C. 4150. Groomb. 1871. }

		12. 12 s
Apr. 20	L	48·18

η Virginis.

		12. 12 s
Apr. 18	L	56·88

B.A.C. 4149.

		12. 13 s
Apr. 22	L	8·80

ζ Corvi.

		12. 13 s
Apr. 1	L	31·55

B.A.C. 4157.

		12. 13 s
Apr. 13	L	54·72
21	Q	54·60

B.A.C. 4171.

	Obsr.	h. m. 12. 16 s
Mar. 24	Q	9·66
Apr. 25	L	(10·12)

B.A.C. 4192.

		12. 19 s
Apr. 14	Q	41·99
22	L	(42·40)

B.A.C. 4204.

		12. 21 s
Mar. 29	Q	22·46
Apr. 1	L	(22·85)
21	Q	22·49

δ Corvi.

		12. 22 s
Apr. 12	Q	49·97
13	L	49·65
May 18	Q	49·90

B.A.C. 4220.

		12. 23 s
Mar. 24	Q	51·52

21 Comæ.

		12. 24 s
Apr. 19	Q	12·89

B.A.C. 4231.

		12. 26 s
May 14	Q	45·33

q Virginis.

		12. 26 s
Mar. 23	L	(45·97)
May 17	M	45·53

B.A.C. 4233.

		12. 26 s
May 18	Q	56·74

β Corvi.

	Obsr.	h. m. 12. 27 s
Apr. 12	Q	14·79
21	Q	14·85

24 Comæ. (1st star.)

		12. 28 s
Apr. 14	Q	16·97

24 Comæ. (2nd star.)

		12. 28 s
Apr. 14	Q	18·56

25 Comæ.

		12. 30 s
Mar. 24	Q	9·05
29	Q	8·98
Apr. 1	L	9·31

B.A.C. 4255.

		12. 31 s
May 13	L	43·99

χ Virginis.

		12. 32 s
Apr. 19	Q	13·73
20	L	13·61
May 17	M	13·58

27 Virginis.

		12. 34 s
Apr. 1	L	43·51

B.A.C. 4278.

		12. 36 s
Apr. 14	Q	45·92
21	Q	45·97

d² Virginis.

	Obsr.	h. m. 12. 38 s
Mar. 29	Q	44·64
Apr. 12	Q	44·82
18	L	45·01

B.A.C. 4291.

		12. 40 s
Apr. 19	Q	7·90
May 7	Q	7·88

34 Virginis.

		12. 40 s
Mar. 30	L	22·93

35 Virginis.

		12. 40 s
Apr. 1	L	56·25
20	L	56·11
May 13	L	55·82
18	Q	56·04
25	Q	55·89
30	Q	55·71

B.A.C. 4297.

		12. 41 s
May 14	Q	11·74

B.A.C. 4310.

		12. 43 s
Apr. 21	Q	26·65

39 Virginis.

		12. 46 s
Apr. 14	Q	32·90
23	Q	32·80

41 Virginis.

		12. 47 s
Apr. 1	L	0·40

ψ Virginis.

	Obsʳ.	h. m. 12. 47 s
Jan. 1	L	16·95
Apr. 19	Q	16·97
20	L	16·87

B.A.C. 4336.

	Obsʳ.	h. m. 12. 48 s
Mar. 30	L	18·06
Apr. 22	L	18·30

B.A.C. 4337.

	Obsʳ.	h. m. 12. 48 s
Apr. 12	Q	22·68
13	L	22·94
25	L	22·93

δ Virginis.

	Obsʳ.	h. m. 12. 48 s
May 30	Q	45·35

46 Virginis.

	Obsʳ.	h. m. 12. 53 s
Mar. 29	Q	35·92

ε Virginis.

	Obsʳ.	h. m. 12. 55 s
May 25	Q	24·39
30	Q	24·42
June 1	Q	24·37

40 Comæ.

	Obsʳ.	h. m. 12. 59 s
May 24	Q	45·27

B.A.C. 4394.

	Obsʳ.	h. m. 13. 1 s
Apr. 12	Q	26·91
25	L	27·24
May 7	Q	27·10

50 Virginis.

	Obsʳ.	h. m. 13. 2 s
Mar. 23	L	38·62
May 17	M	38·30
18	Q	38·41

θ Virginis.

	Obsʳ.	h. m. 13. 2 s
Jan. 1	L	54·73
May 5	Q	54·87
27	Q	54·64
June 1	Q	54·70

B.A.C. 4431.

	Obsʳ.	h. m. 13. 7 s
May 5	Q	1·83
24	Q	1·77

56 Virginis.

	Obsʳ.	h. m. 13. 7 s
May 27	Q	37·35

B.A.C. 4437.

	Obsʳ.	h. m. 13. 9 s
Apr. 23	Q	20·17

B.A.C. 4441.

	Obsʳ.	h. m. 13. 10 s
Mar. 29	Q	18·40
30	L	18·61

58 Virginis.

	Obsʳ.	h. m. 13. 10 s
Mar. 23	L	19·81

σ Virginis.

	Obsʳ.	h. m. 13. 10 s
May 17	M	44·31

B.A.C. 4455.

	Obsʳ.	h. m. 13. 12 s
Apr. 29	L	(35·02)
May 24	Q	34·40

B.A.C. 4471.

	Obsʳ.	h. m. 13. 14 s
Jan. 1	L	57·09

63 Virginis.

	Obsʳ.	h. m. 13. 15 s
Mar. 30	L	44·49

Spica.

	Obsʳ.	h. m. 13. 18 s
Mar. 29	Q	1·92
Apr. 20	L	1·83
21	Q	1·89
23	Q	1·94
May 5	Q	1·83
17	M	1·97
18	Q	1·95
27	Q	1·93
June 1	Q	1·89
7	Q	1·97
8	Q	1·78
July 12	Q	1·90

B.A.C. 4488.

	Obsʳ.	h. m. 13. 18 s
Apr. 1	L	(49·83)
14	Q	49·12
18	L	49·43

B.A.C. 4503.

	Obsʳ.	h. m. 13. 22 s
Apr. 23	Q	20·47
May 13	L	(20·99)
24	Q	20·70

71 Virginis.

	Obsʳ.	h. m. 13. 22 s
Mar. 29	Q	28·64
June 1	Q	28·69

B.A.C. 4511.

	Obsʳ.	h. m. 13. 23 s
Jan. 1	L	50·50
May 27	Q	50·27

Lalande 25006.

	Obsʳ.	h. m. 13. 24 s
May 30	Q	20·32

B.A.C. 4513.

	Obsʳ.	h. m. 13. 24 s
May 30	Q	25·23

73 Virginis.

	Obsʳ.	h. m. 13. 24 s
Apr. 1	L	43·53
May 14	Q	43·31

h Virginis.

	Obsʳ.	h. m. 13. 25 s
Apr. 20	L	48·45
21	Q	48·36

W.B. (1) xiii. 440.

	Obsʳ.	h. m. 13. 27 s
Apr. 14	Q	14·18

ζ Virginis.

	Obsʳ.	h. m. 13. 27 s
Jan. 1	L	46·01
Apr. 1	L	45·85
18	L	45·86
29	L	45·96
May 5	Q	45·82
17	M	45·91
18	Q	45·91
24	Q	45·83
25	Q	45·79
June 7	Q	45·86

80 Virginis.

	Obsʳ.	h. m. 13. 28 s
June 3	Q	26·84

B.A.C. 4554.

	Obsʳ.	h. m. 13. 32 s
Apr. 12	Q	4·18

B.A.C. 4559.

	Obs^r.	h. m.
		13. 32 s
Apr. 21	Q	52·16
29	L	52·42

***m* Virginis.**

	Obs^r.	h. m.
		13. 34 s
May 5	Q	28·51
24	Q	28·44

B.A.C. 4572.

	Obs^r.	h. m.
		13. 36 s
May 27	Q	49·81

83 Virginis.

	Obs^r.	h. m.
		13. 37 s
June 3	Q	9·63
6	Q	9·72

B.A.C. 4576.

	Obs^r.	h. m.
		13. 37 s
Apr. 14	Q	27·44

B.A.C. 4578.

	Obs^r.	h. m.
		13. 37 s
May 30	Q	59·38

B.A.C. 4593.

	Obs^r.	h. m.
		13. 40 s
May 24	Q	19·02

τ Boötis.

	Obs^r.	h. m.
		13. 40 s
Apr. 21	Q	48·07
29	L	47·75
May 5	Q	47·91

89 Virginis.

	Obs^r.	h. m.
		13. 42 s
Apr. 12	Q	29·09

B.A.C. 4621.

	Obs^r.	h. m.
		13. 43 s
Apr. 29	L	37·91

B.A.C. 4632.

	Obs^r.	h. m.
		13. 45 s
Apr. 14	Q	47·26

B.A.C. 4639.

	Obs^r.	h. m.
		13. 46 s
Jan. 1	L	58·34
Apr. 21	Q	58·20

η Boötis.

	Obs^r.	h. m.
		13. 48 s
May 24	Q	12·64
25	Q	12·71
27	Q	12·50
June 1	Q	12·64
3	Q	12·52
6	Q	12·51

92 Virginis.

	Obs^r.	h. m.
		13. 49 s
Apr. 22	L	32·24

47 Hydræ.

	Obs^r.	h. m.
		13. 50 s
May 14	Q	53·73

B.A.C. 4662.

	Obs^r.	h. m.
		13. 52 s
Apr. 29	L	6·13

10 Boötis.

	Obs^r.	h. m.
		13. 52 s
May 5	Q	16·47
13	L	16·65

B.A.C. 4665.

	Obs^r.	h. m.
		13. 52 s
June 6	Q	46·49

W.B. (1) xiii. 904.

	Obs^r.	h. m.
		13. 53 s
May 7	Q	22·13

τ Virginis.

	Obs^r.	h. m.
		13. 54 s
Apr. 12	Q	43·70
14	Q	43·59
May 24	Q	43·61
June 3	Q	43·62
10	Q	43·64
11	Q	43·63

B.A.C. 4680.

	Obs^r.	h. m.
		13. 57 s
Apr. 23	Q	9·44
29	L	(10·02)

B.A.C. 4683.

	Obs^r.	h. m.
		13. 57 s
Apr. 19	Q	52·03

B.A.C. 4694.

	Obs^r.	h. m.
		14. 0 s
Apr. 14	Q	24·17
22	L	24·45
May 25	Q	24·27

B.A.C. 4697.

	Obs^r.	h. m.
		14. 1 s
Apr. 12	Q	11·87

B.A.C. 4702.

	Obs^r.	h. m.
		14. 3 s
May 7	Q	50·23
30	Q	50·37

B.A.C. 4714.

	Obs^r.	h. m.
		14. 5 s
June 6	Q	19·06

B.A.C. 4713.

	Obs^r.	h. m.
		14. 5 s
Apr. 20	L	22·77

κ Virginis.

	Obs^r.	h. m.
		14. 5 s
Apr. 21	Q	38·53
22	L	38·53
29	L	38·67
May 18	Q	38·51
June 11	Q	38·68

Arcturus.

	Obs^r.	h. m.
		14. 9 s
Apr. 19	Q	27·58
23	Q	27·71
June 10	Q	27·66
11	Q	27·65

B.A.C. 4739.

	Obs^r.	h. m.
		14. 11 s
June 6	Q	7·33

λ Virginis.

	Obs^r.	h. m.
		14. 11 s
Apr. 21	Q	45·22
22	L	45·11
May 18	Q	45·18
19	Q	45·23
June 16	Q	45·25

B.A.C. 4750.

	Obs^r.	h. m.
		14. 12 s
Apr. 19	Q	44·58
June 7	Q	44·59

υ^2 Virginis.

	Obs^r.	h. m.
		14. 14 s
Apr. 23	Q	58·09
June 10	Q	58·23

B.A.C. 4764. (1st star.)

	Obsr.	h. m.
		14. 15 s
Apr. 18	L	27·34

B.A.C. 4764. (2nd star.)

		14. 15 s
Apr. 18	L	27·41

2 Libræ.

		14. 16 s
Apr. 21	Q	6·80
22	L	(6·37)
May 30	Q	6·87
June 8	Q	6·75

B.A.C. 4771.

		14. 17 s
May 7	Q	18·64
13	L	18·83
27	Q	18·66

B.A.C. 4777.

		14. 17 s
June 3	Q	55·60

***f* Boötis.**

		14. 20 s
Jan. 3	L	7·99
Apr. 18	L	7·97
June 6	Q	7·95
13	Q	7·86

106 Virginis.

		14. 21 s
Apr. 19	Q	31·48
22	L	31·60

B.A.C. 4798.

		14. 22 s
June 7	Q	54·41

B.A.C. 4800.

	Obsr.	h. m.
		14. 23 s
Apr. 21	Q	12·08

B.A.C. 4803.

		14. 23 s
May 7	Q	59·99
June 10	Q	60·05

***ρ* Boötis.**

		14. 25 s
June 6	Q	58·09
8	Q	57·97
13	Q	58·08
16	Q	58·12
21	Q	58·06

B.A.C. 4814.

		14. 27 s
June 3	Q	11·73

B.A.C. 4824.

		14. 29 s
May 30	Q	2·22

B.A.C. 4825.

		14. 29 s
Apr. 29	Q	4·95

3 Libræ.

		14. 31 s
June 8	Q	31·19
13	Q	31·18

B.A.C. 4838.

		14. 31 s
Apr. 21	Q	45·86
22	L	45·83

B.A.C. 4840.

		14. 33 s
Apr. 20	L	2·79
23	Q	2·53

B.A.C. 4857.

	Obsr.	h. m.
		14. 36 s
May 7	Q	28·10
June 10	Q	28·33

B.A.C. 4863.

		14. 37 s
May 26	Q	9·39
June 7	Q	9·31
16	Q	9·50

5 Libræ.

		14. 38 s
May 24	Q	27·82
June 3	Q	27·98

***ε* Boötis.**

		14. 39 s
Apr. 19	Q	2·83
May 13	L	2·81
14	Q	2·89
30	Q	2·94

B.A.C. 4886.

		14. 40 s
Apr. 20	L	32·98

B.A.C. 4888.

		14. 41 s
Apr. 21	Q	27·65
22	L	27·60

***α* Libræ.**

		14. 43 s
Jan. 3	L	21·47
Apr. 19	Q	21·57
23	Q	21·38
June 8	Q	21·64
13	Q	21·47
15	Q	21·47
16	Q	21·49
21	Q	21·58

10 Libræ.

	Obsr.	h. m.
		14. 44 s
June 6	Q	13·85

12 Libræ.

		14. 46 s
May 7	Q	26·42
13	L	26·71
June 7	Q	26·57

ξ^1 Libræ.

		14. 46 s
Apr. 23	Q	59·75
June 1	Q	60·06

ξ^2 Libræ.

		14. 49 s
Jan. 3	L	23·55
Apr. 20	L	23·73
21	Q	23·47
May 26	Q	23·57
June 8	Q	23·69
10	Q	23·50

14 Libræ.

		14. 49 s
June 3	Q	34·84

B.A.C. 4926.

		14. 49 s
May 30	Q	48·24

***β* Ursæ Minoris.**

		14. 51 s
Nov. 25	Q	8·25
Dec. 6	Q	7·88

B.A.C. 4941.

		14. 54 s
Apr. 21	Q	16·08
June 21	Q	16·10

B.A.C. 4945.

	Obsʳ.	h. m.
		14. 54
		s
May 13	L	54·53
June 8	Q	54·35

Groombridge 2210.

		14. 56
		s
Jan. 1	L	39·06

ψ Boötis.

		14. 58
		s
Apr. 22	L	36·91
May 7	Q	37·15
June 10	Q	37·02
11	Q	37·10
15	Q	37·19

B.A.C. 4997.

		15. 4
		s
May 7	Q	28·90
13	L	29·23

B.A.C. 4998.

		15. 5
		s
May 26	Q	20·85

4 Serpentis.

		15. 8
		s
May 13	L	53·83

β Libræ.

		15. 9
		s
Jan. 3	L	41·41
May 14	Q	41·53
27	Q	41·54

o² Libræ.

		15. 15
		s
Apr. 22	L	26·92
May 7	Q	26·89
13	L	27·15

τ¹ Serpentis.

	Obsʳ.	h. m.
		15. 19
		s
May 7	Q	28·88
June 21	Q	28·99

ζ¹ Libræ.

		15. 20
		s
June 15	Q	35·32
16	Q	35·53
30	Q	35·41

B.A.C. 5090.

		15. 20
		s
June 13	Q	43·62

B.A.C. 5109.

		15. 24
		s
May 29	Q	48·14

11 Serpentis.

		15. 25
		s
June 21	Q	57·87

B.A.C. 5126.

		15. 26
		s
June 15	Q	48·54

γ Libræ.

		15. 27
		s
Apr. 22	L	55·04
June 16	Q	55·36

α Coronæ.

		15. 28
		s
May 18	Q	55·88
26	Q	55·76
June 11	Q	55·77
30	Q	55·85
July 5	Q	55·88

B.A.C. 5167.

	Obsʳ.	h. m.
		15. 33
		s
June 13	Q	12·82

κ Libræ.

		15. 34
		s
Apr. 22	L	6·84
May 24	Q	6·90
27	Q	6·90

τ⁶ Serpentis.

		15. 34
		s
June 21	Q	44·11

χ Serpentis.

		15. 35
		s
May 18	Q	23·48

τ⁷ Serpentis.

		15. 35
		s
June 27	Q	47·69

α Serpentis.

		15. 37
		s
May 26	Q	34·18
June 8	Q	34·22
11	Q	34·16
16	Q	34·27
30	Q	34·26
July 5	Q	34·28

τ⁸ Serpentis.

		15. 38
		s
May 7	Q	31·50

A² Serpentis.

		15. 39
		s
June 15	Q	3·64

ω Serpentis.

		15. 43
		s
June 13	Q	25·64

ε Serpentis.

	Obsʳ.	h. m.
		15. 44
		s
May 27	Q	2·29
June 1	Q	2·24

θ Libræ.

		15. 46
		s
May 24	Q	4·99

B.A.C. 5258.

		15. 46
		s
May 7	Q	13·49
26	Q	13·64

ζ Ursæ Minoris.

		15. 48
		s
Nov. 29	Q	59·92
Dec. 6	Q	58·91
12	Q	59·31

γ Serpentis.

		15. 50
		s
Aug. 11	Q	10·41

δ Scorpii.

		15. 52
		s
June 30	Q	17·70

50 Libræ.

		15. 53
		s
May 7	Q	27·08

β¹ Scorpii.

		15. 57
		s
May 24	Q	32·09

11 Scorpii.

		16. 0
		s
May 24	Q	3·34

B.A.C. 5354.

	Obsr.	h. m.
		16. 0
		s
May 27	Q	36·45

c^1 Scorpii.

		16. 3
		s
June 3	Q	51·96

B.A.C. 5408.

		16. 6
		s
June 8	Q	48·65

δ Ophiuchi.

		16. 7
		s
Jan. 27	L	12·99
May 26	Q	13·32
June 1	Q	13·12
6	Q	13·30
7	Q	13·06
30	Q	13·14
Aug. 10	Q	13·25

B.A.C. 5436.

		16. 11
		s
June 6	Q	9·99
7	Q	10·06

γ Herculis.

		16. 15
		s
May 27	Q	55·27
June 3	Q	55·33
21	Q	55·40
July 21	Q	55·34
Aug. 11	Q	55·31

B.A.C. 5464.

		16. 16
		s
June 8	Q	7·52

*** N.P.D. 113° 5′.**
(South star.)

		16. 17
		s
July 5	Q	25·69

*** N.P.D. 113° 5′.**
(North star.)

	Obsr.	h. m.
		16. 17
		s
July 5	Q	25·69

B.A.C. 5478.

		16. 17
		s
July 4	Q	26·13

23 Herculis.

		16. 17
		s
June 16	Q	43·27

Antares.

		16. 21
		s
June 3	Q	4·28
7	Q	4·39
21	Q	4·30
July 12	Q	4·36
Aug. 11	Q	4·23

λ Ophiuchi.

		16. 24
		s
Jan. 27	L	3·30
June 6	Q	3·24
July 14	Q	3·29
16	Q	3·34

B.A.C. 5537.

		16. 27
		s
June 16	Q	7·12

32 Herculis.

		16. 28
		s
June 6	Q	11·06

ζ Ophiuchi.

		16. 29
		s
Jan. 27	L	40·42
June 3	Q	40·42
7	Q	40·43
30	Q	40·44

ζ Ophiuchi.
(*concluded.*)

	Obsr.	h. m.
		16. 29
		s
July 14	Q	40·34
19	Q	40·44
23	Q	40·33
Aug. 11	Q	40·45

33 Herculis.

		16. 30
		s
July 12	Q	15·37

B.A.C. 5563.

		16. 31
		s
June 21	Q	31·98

B.A.C. 5567.

		16. 32
		s
July 13	Q	33·69

B.A.C. 5587.

		16. 34
		s
June 3	Q	31·43

B.A.C. 5600.

		16. 35
		s
June 6	Q	51·21
July 14	Q	51·24

ζ Herculis.

		16. 36
		s
July 6	Q	9·65
16	Q	9·59
19	Q	9·65

B.A.C. 5619.

		16. 38
		s
June 16	Q	50·82

B.A.C. 5620.

		16. 39
		s
July 12	Q	13·06

l Herculis.

	Obsr.	h. m.
		16. 41
		s
July 6	Q	4·72

B.A.C. 5634.

		16. 41
		s
July 20	Q	42·38

B.A.C. 5641.

		16. 43
		s
July 4	Q	3·66

B.A.C. 5642.

		16. 43
		s
June 3	Q	6·36

B.A.C. 5647.

		16. 43
		s
June 8	Q	17·95

48 Herculis.

		16. 43
		s
June 6	Q	57·90

B.A.C. 5663.

		16. 45
		s
June 21	Q	23·74
July 19	Q	23·49

B.A.C. 5671.

		16. 45
		s
July 13	Q	55·57

51 Herculis.

		16. 46
		s
July 5	Q	7·10
16	Q	6·97

B.A.C. 5687.

		16. 47
		s
June 13	Q	23·59

B.A.C. 5695.

	Obsr.	h. m.	s
June 16	Q	16. 48	10·99

24 Ophiuchi.

	Obsr.	h. m.	s
July 14	Q	16. 48	36·03

κ Ophiuchi.

	Obsr.	h. m.	s
June 11	Q	16. 51	13·93
15	Q		13·88
July 12	Q		14·01
Aug. 8	Q		13·83

57 Herculis.

	Obsr.	h. m.	s
June 8	Q	16. 51	56·02

B.A.C. 5716.

	Obsr.	h. m.	s
June 6	Q	16. 52	28·55

ε Herculis.

	Obsr.	h. m.	s
July 6		16. 55	5·14
12	Q		5·15
20	Q		5·09

B.A.C. 5730.

	Obsr.	h. m.	s
July 5	Q	16. 55	13·49

B.A.C. 5737.

	Obsr.	h. m.	s
June 16	Q	16. 55	53·74
21	Q		53·89

B.A.C. 5758.

	Obsr.	h. m.	s
June 13	Q	16. 58	4·69

B.A.C. 5759.

	Obsr.	h. m.	s
July 14	Q	16. 58	27·49

B.A.C. 5767.

	Obsr.	h. m.	s
June 8	Q	16. 59	36·19

B.A.C. 5774.

	Obsr.	h. m.	s
July 12	Q	17. 1	12·75

η Ophiuchi.

	Obsr.	h. m.	s
June 16	Q	17. 2	34·96
July 13	Q		34·88
16	Q		34·74
20	Q		34·74
21	Q		34·82
Oct. 6	Q		34·76

α Herculis.

	Obsr.	h. m.	s
Jan. 25	L	17. 8	26·79
June 13	Q		26·86
July 13	Q		26·79
14	Q		26·69
19	Q		26·74
21	Q		27·01

38 Ophiuchi.

	Obsr.	h. m.	s
June 16	Q	17. 9	12·74

B.A.C. 5838.

	Obsr.	h. m.	s
July 13	Q	17. 11	50·21

θ Ophiuchi.

	Obsr.	h. m.	s
June 13	Q	17. 13	39·62
15	Q		39·68

θ Ophiuchi. (*concluded.*)

	Obsr.	h. m.	s
July 14	Q	17. 13	39·60
16	Q		39·56
Aug. 6	Q		39·61
13	Q		39·50

B.A.C. 5862.

	Obsr.	h. m.	s
July 12	Q	17. 15	46·49

b Ophiuchi.

	Obsr.	h. m.	s
Aug. 13	Q	17. 18	3·87

O.A. (S.Z.) 16772–3.

	Obsr.	h. m.	s
June 13	Q	17. 18	24·27

B.A.C. 5878.

	Obsr.	h. m.	s
July 20	Q	17. 18	30·32

B.A.C. 5880.

	Obsr.	h. m.	s
July 21	Q	17. 18	33·96

Lalande 31726.

	Obsr.	h. m.	s
June 16	Q	17. 19	5·53

σ Ophiuchi.

	Obsr.	h. m.	s
June 15	Q	17. 19	46·06
July 4	Q		45·98
5	Q		45·97
6	Q		46·12
19	Q		45·99
29	Q		46·04

B.A.C. 5909.

	Obsr.	h. m.	s
July 13	Q	17. 23	17·72

B.A.C. 5920.

	Obsr.	h. m.	s
June 15	Q	17. 25	4·27
July 4	Q		4·40
5	Q		4·36

B.A.C. 5927.

	Obsr.	h. m.	s
July 14	Q	17. 25	46·46

78 Herculis.

	Obsr.	h. m.	s
July 20	Q	17. 26	29·23
Aug. 1	Q		29·04

α Ophiuchi.

	Obsr.	h. m.	s
Jan. 25	L	17. 28	37·31
July 29	Q		37·34
Aug. 6	Q		37·37
23	Q		37·36

56 Ophiuchi.

	Obsr.	h. m.	s
June 16	Q	17. 28	46·48
July 21	Q		46·32

B.A.C. 5985.

	Obsr.	h. m.	s
July 19	Q	17. 34	54·42

B.A.C. 5989.

	Obsr.	h. m.	s
July 20	Q	17. 36	0·11

β Ophiuchi.

	Obsʳ.	h. m.
		17. 36
		s
Jan. 27	L	45·45
July 4	Q	45·23
13	Q	45·27
23	Q	45·32
Aug. 1	Q	45·12
6	Q	45·27
23	Q	45·25

B.A.C. 6015.

		17. 39
		s
July 5	Q	57·67
12	Q	57·73

μ Herculis.

		17. 41
		s
July 4	Q	8·26
6	Q	8·24
16	Q	8·29
30	Q	8·27
Aug. 1	Q	8·26

B.A.C. 6023.

		17. 41
		s
July 14	Q	38·49
29	Q	38·32

B.A.C. 6035.

		17. 43
		s
July 21	Q	42·79

B.A.C. 6041.

		17. 44
		s
Aug. 12	Q	18·41

B.A.C. 6054.

		17. 46
		s
July 4	Q	33·18
Aug. 1	Q	33·17

B.A.C. 6060.

	Obsʳ.	h. m.
		17. 47
		s
July 20	Q	55·05

B.A.C. 6066.

		17. 48
		s
Aug. 6	Q	48·87

B.A.C. 6069.

		17. 49
		s
July 12	Q	22·61

89 Herculis.

		17. 49
		s
July 13	Q	56·03
23	Q	56·07
30	Q	56·07
Aug. 13	Q	56·06
23	Q	55·99
29	L	56·07

B.A.C. 6075.

		17. 50
		s
July 5	Q	34·54

B.A.C. 6081.

		17. 51
		s
July 14	Q	54·72

B.A.C. 6099.

		17. 54
		s
July 13	Q	47·61

68 Ophiuchi.

		17. 54
		s
July 16	Q	51·31
21	Q	51·12

95 Herculis. (1st star.)

	Obsʳ.	h. m.
		17. 55
		s
July 6	Q	43·82
30	Q	43·73
Aug. 8	Q	43·81

95 Herculis. (2nd star.)

		17. 55
		s
July 30	Q	44·10
Aug. 8	Q	44·55

γ^1 Sagittarii.

		17. 56
		s
July 4	Q	20·17

97 Herculis.

		17. 56
		s
July 29	Q	49·14

B.A.C. 6127.

		17. 59
		s
Aug. 29	L	28·34

B.A.C. 6137.

		18. 0
		s
July 12	Q	30·85

72 Ophiuchi.

		18. 0
		s
July 19	Q	54·06
Aug. 12	Q	54·16
18	Q	54·16
20	Q	54·10
23	Q	54·16

B.A.C. 6158.

		18. 3
		s
July 5	Q	11·25

B.A.C. 6161.

	Obsʳ.	h. m.
		18. 3
		s
July 14	Q	25·39

μ Sagittarii.

		18. 5
		s
July 16	Q	37·87
23	Q	37·91
Aug. 1	Q	37·86
6	Q	37·68
8	Q	37·63
Oct. 7	Q	37·88

O. A. (S.Z.) 17876.

		18. 6
		s
Aug. 29	L	22·99

16 Sagittarii.

		18. 7
		s
July 4	Q	7·47
13	Q	7·47

17 Sagittarii.

		18. 8
		s
Aug. 15	Q	29·16

B.A.C. 6196.

		18. 9
		s
Aug. 12	Q	45·37

B.A.C. 6210.

		18. 12
		s
July 5	Q	19·04

η Serpentis.

		18. 14
		s
Aug. 20	Q	16·23
26	Q	16·50

δ Ursæ Minoris.

	Obsr.	h. m. 18. 16 s
Aug. 31	L	13·21
31	L	13·54
Sept. 1	L	13·51

21 Sagittarii.

		18. 17 s
Aug. 13	Q	14·94

B.A.C. 6260.

		18. 19 s
Aug. 15	Q	7·76

λ Sagittarii.

		18. 19 s
July 4	Q	34·68
5	Q	34·65
Aug. 12	Q	34·64

B.A.C. 6294.

		18. 23 s
July 14	Q	28·13
Aug. 18	Q	28·29
26	Q	28·18

B.A.C. 6295.

		18. 23 s
Aug. 29	L	35·08

O. A. (S.Z.) 18344.

		18. 24 s
July 5	Q	3·40

B.A.C. 6301.

		18. 24 s
Sept. 1	Q	29·10

B.A.C. 6304.

		18. 24 s
July 4	Q	55·56

24 Sagittarii.

	Obsr.	h. m. 18. 25 s
July 23	Q	34·96
Aug. 31	L	35·01

B.A.C. 6327.

		18. 28 s
Aug. 29	L	27·49

α Lyræ.

		18. 32 s
Aug. 20	Q	20·15
26	Q	20·06

2 Aquilæ.

		18. 34 s
July 4	Q	49·65
5	Q	49·69
Sept. 1	Q	49·74
9	Q	49·56

4 Aquilæ.

		18. 37 s
Aug. 26	Q	58·17

5 Aquilæ. (1st star.)

		18. 39 s
July 4	Q	27·08
5	Q	27·13

5 Aquilæ. (2nd star.)

		18. 39 s
July 4	Q	27·76
5	Q	27·81

B.A.C. 6401.

		18. 42 s
Aug. 31	L	9·63

B.A.C. 6422.

	Obsr.	h. m. 18. 44 s
Aug. 29	L	36·03

β Lyræ.

		18. 45 s
Feb. 16	Q	3·59
July 6	Q	3·50
12	Q	3·53
Aug. 8	Q	3·71

33 Sagittarii.

		18. 45 s
July 21	Q	52·24
Aug. 6	Q	52·43
Sept. 18	L	52·65

B.A.C. 6448.

		18. 47 s
July 5	Q	46·39
20	Q	46·58
Aug. 12	Q	46·43

B.A.C. 6450.

		18. 48 s
Aug. 31	L	20·21
Sept. 5	Q	19·89

ξ^1 Sagittarii.

		18. 49 s
July 13	Q	15·53
Aug. 10	Q	15·40

10 Aquilæ.

		18. 52 s
July 19	Q	32·41

11 Aquilæ.

		18. 52 s
July 29	Q	50·05

B.A.C. 6485.

	Obsr.	h. m. 18. 53 s
Aug. 29	L	25·90
31	L	25·83

ε Aquilæ.

		18. 53 s
July 14	Q	27·12
16	Q	26·95
Aug. 9	Q	27·00
16	Q	26·96
26	Q	26·90
Sept. 10	Q	26·98
19	Q	26·95
21	Q	26·94

λ Lyræ.

		18. 54 s
Aug. 6	Q	53·09

g Aquilæ.

		18. 55 s
July 23	Q	44·73

B.A.C. 6513.

		18. 57 s
July 21	Q	18·31

B.A.C. 6519.

		18. 57 s
Sept. 9	Q	53·72

B.A.C. 6524.

		18. 58 s
Aug. 29	L	47·35
31	L	47·57

B.A.C. 6527.

		18. 58 s
July 14	Q	54·94

ζ Aquilæ.

	Obsr.	h. m.
		18. 59
		s
July 20	Q	9·71
30	Q	9·44
Aug. 1	Q	9·76
9	Q	9·58
10	Q	9·62
18	Q	9·42

B.A.C. 6544.

		19. 0
		s
Sept. 27	Q	45·64

B.A.C. 6560.

		19. 4
		s
July 29	Q	10·85
30	Q	10·76

19 Lyræ.

		19. 6
		s
Aug. 16	Q	32·65

B.A.C. 6574.

		19. 6
		s
July 16	Q	46·80
19	Q	46·71

ψ Sagittarii.

		19. 7
		s
July 20	Q	11·97
21	Q	11·88
Aug. 20	Q	11·95
26	Q	11·86
29	L	12·02
31	L	11·76
Sept. 5	Q	11·92
10	Q	11·93
19	Q	11·93

B.A.C. 6576.

		19. 7
		s
Sept. 28	L	16·30

d Sagittarii.

	Obsr.	h. m.
		19. 9
		s
July 14	Q	40·56
Aug. 1	Q	40·58

ω Aquilæ.

		19. 11
		s
July 20	Q	25·95
21	Q	25·75
Aug. 10	Q	25·81
13	Q	25·93
18	Q	25·88
Sept. 27	Q	25·99
28	L	25·94

B.A.C. 6604.

		19. 12
		s
Aug. 29	L	25·58

B.A.C. 6627.

		19. 15
		s
Sept. 24	M	48·94

χ¹ Sagittarii.

		19. 16
		s
July 21	Q	59·72
Aug. 9	Q	59·73

B.A.C. 6641.

		19. 18
		s
July 20	Q	23·04
Sept. 28	L	23·43

δ Aquilæ.

		19. 18
		s
July 29	Q	38·44
30	Q	38·31
Aug. 8	Q	38·46
12	Q	38·45
13	Q	38·50
16	Q	38·45
Sept. 5	Q	38·31
10	Q	38·41
27	Q	38·46

B.A.C. 6651.

	Obsr.	h. m.
		19. 19
		s
July 23	Q	13·11

B.A.C. 6658.

		19. 20
		s
Aug. 23	Q	10·46

5 Vulpeculæ.

		19. 20
		s
July 14	Q	16·86
16	Q	16·92

4 Cygni.

		19. 21
		s
Aug. 26	Q	15·22

B.A.C. 6671.

		19. 22
		s
Aug. 31	L	49·52

α Vulpeculæ.

		19. 23
		s
July 19	Q	2·78
29	Q	2·77
Aug. 18	Q	2·88

7 Vulpeculæ.

		19. 23
		s
Aug. 20	Q	24·91
Sept. 28	L	25·22

B.A.C. 6677.

		19. 23
		s
Aug. 10	Q	33·99
29	L	34·34

B.A.C. 6682.

		19. 24
		s
Sept. 30	L	11·83

B.A.C. 6695.

	Obsr.	h. m.
		19. 26
		s
Aug. 1	Q	7·55
13	Q	7·57

8 Cygni.

		19. 26
		s
Sept. 24	M	43·01

μ Aquilæ.

		19. 27
		s
Aug. 16	Q	26·66

h² Sagittarii.

		19. 28
		s
July 19	Q	25·70
30	Q	25·74
Aug. 24	Q	25·69
29	Q	25·73
Sept. 5	Q	25·73
28	L	25·90

B.A.C. 6707.

		19. 28
		s
July 20	Q	30·35

9 Vulpeculæ.

		19. 28
		s
July 16	Q	36·52
21	Q	36·41

B.A.C. 6716.

		19. 30
		s
Aug. 23	Q	26·78

W.B. (2) xix. 943.

		19. 30
		s
Sept. 27	Q	47·70

45 Aquilæ.

		19. 33
		s
July 23	Q	42·77
Sept. 19	Q	42·89

Star	Date	Obsr.	h. m.	s.
B.A.C. 6738.	Aug. 12	Q	19. 34	7·14
46 Aquilæ.	July 29	Q	19. 35	49·93
	Aug. 9	Q		50·04
	20	Q		49·89
Piazzi xix. 248.	Aug. 10	Q	19. 37	39·25
10 Vulpeculæ.	July 19	Q	19. 38	3·45
	20	Q		3·63
ψ Aquilæ.	Aug. 1	Q	19. 38	14·48
	18	Q		14·66
	Sept. 24	M		14·74
υ Aquilæ.	July 21	Q	19. 39	2·78
* N.P.D. 118° 49′.	Aug. 31	L	19. 39	21·09
	Sept. 26	L		21·12
γ Aquilæ.	Aug. 16	Q	19. 39	47·52
	24	Q		47·58
	Sept. 10	Q		47·61
B.A.C. 6776.	Sept. 30	L	19. 40	24·67
α Aquilæ.	Feb. 16	L	19. 44	9·07
	July 23	Q		8·70
	Sept. 19	Q		8·59
	24	M		8·77
12 Vulpeculæ.	July 30	Q	19. 45	12·60
	Aug. 23	Q		12·72
B.A.C. 6814.	Aug. 10	Q	19. 46	8·96
	31	L		8·75
	Sept. 5	Q		8·88
B.A.C. 6815.	July 20	Q	19. 46	11·34
9 Sagittæ.	Sept. 30	L	19. 46	17·98
56 Aquilæ.	Sept. 27	Q	19. 46	45·56
β Aquilæ.	July 23	Q	19. 48	37·87
	Aug. 1	Q		37·75
	9	Q		37·99
	Sept. 12	Q		37·91
	23	Q		37·98
	24	M		38·24
φ Aquilæ.	Aug. 20	Q	19. 49	47·78
10 Sagittæ.	July 21	Q	19. 49	50·43
B.A.C. 6850.	July 29	Q	19. 51	30·39
	Aug. 6	Q		30·44
	26	Q		30·23
B.A.C. 6854.	Sept. 23	M	19. 52	10·52
	30	L		10·91
c Sagittarii.	Aug. 31	L	19. 54	17·45
16 Vulpeculæ.	July 30	Q	19. 56	15·24
	Aug. 10	Q		15·45
B.A.C. 6903.	Sept. 24	M	20. 0	21·38
B.A.C. 6920.	Aug. 31	L	20. 1	54·58
θ Aquilæ.	Aug. 9	Q	20. 4	17·07
	10	Q		17·24
	16	Q		17·26
66 Aquilæ.	July 29	Q	20. 6	12·42
	Aug. 6	Q		12·38
	Sept. 28	L		12·76
B.A.C. 6949.	Sept. 27	Q	20. 7	20·36
B.A.C. 6953.	July 30	Q	20. 8	19·46
α¹ Capricorni.	Oct. 3	Q	20. 10	6·41
	4	Q		6·41
α² Capricorni.	Aug. 10	Q	20. 10	30·31
	Sept. 24	M		30·30
B.A.C. 6982.	Aug. 31	L	20. 11	36·66
B.A.C. 6987.	Sept. 28	L	20. 12	36·31
	30	L		36·22
κ Cephei.	Feb. 23	Q	20. 13	24·10
	Mar. 1	Q		24·25
B.A.C. 7009.	Aug. 10	Q	20. 15	49·77

25 Vulpeculæ.

	Obsr.	h. m.
		20. 16
		s
Aug. 6	Q	12·68
16	Q	12·42

B.A.C. 7019.

		20. 17
		s
Sept. 5	Q	13·07
24	M	13·17

B.A.C. 7023.

		20. 17
		s
July 29	Q	38·58
Sept. 30	L	38·93

B.A.C. 7026.

		20. 18
		s
Sept. 27	Q	11·78

B.A.C. 7030.

		20. 19
		s
Aug. 29	L	8·76

B.A.C. 7034.

		20. 19
		s
Aug. 26	Q	51·65

ρ Capricorni.

		20. 21
		s
July 30	Q	5·99
Aug. 9	Q	5·96
24	Q	5·93
31	L	6·07
Sept. 26	L	5·94
Oct. 3	Q	6·00

68 Aquilæ.

		20. 21
		s
Sept. 28	L	17·78

ο Capricorni.

	Obsr.	h. m.
		20. 22
		s
Oct. 4	Q	5·97

40 Cygni.

		20. 22
		s
Aug. 20	Q	32·17

B.A.C. 7057.

		20. 22
		s
Sept. 30	L	36·98

B.A.C. 7087.

		20. 26
		s
Sept. 24	M	37·32
Oct. 5	Q	37·32

ε Delphini.

		20. 26
		s
Aug. 16	Q	43·04
29	L	42·78
Sept. 21	Q	42·97

η Delphini.

		20. 27
		s
Aug. 6	Q	30·96

B.A.C. 7097.

		20. 27
		s
Aug. 10	Q	50·29

τ¹ Capricorni.

		20. 29
		s
July 30	Q	43·17
Sept. 26	L	43·57

B.A.C. 7111.

		20. 29
		s
Sept. 30	L	46·40

B.A.C. 7113.

	Obsr.	h. m.
		20. 30
		s
Aug. 31	L	1·80

B.A.C. 7130.

		20. 32
		s
Sept. 28	L	(9·05)
Oct. 6	Q	8·60

W.B. (1) xx. 827.

		20. 32
		s
Sept. 17	Q	46·45

α Delphini.

		20. 33
		s
Oct. 3	Q	19·30

B.A.C. 7151.

		20. 33
		s
Sept. 24	M	36·58

B.A.C. 7159.

		20. 34
		s
Oct. 4	Q	55·49
5	Q	55·32

α Cygni.

		20. 36
		s
Mar. 11	Q	47·73

B.A.C. 7170.

		20. 37
		s
Sept. 26	L	3·14

B.A.C. 7172.

		20. 37
		s
Aug. 6	Q	4·42
13	Q	4·41
18	Q	4·46

B.A.C. 7180.

	Obsr.	h. m.
		20. 38
		s
Aug. 10	Q	17·26
Oct. 7	Q	17·39

B.A.C. 7183.

		20. 38
		s
Sept. 13	Q	34·83

ε Aquarii.

		20. 40
		s
Aug. 12	Q	18·66
Sept. 28	L	18·60

B.A.C. 7216.

		20. 42
		s
Sept. 19	Q	29·03
26	L	29·08

B.A.C. 7232.

		20. 44
		s
Sept. 5	Q	34·04
Oct. 3	Q	34·13

B.A.C. 7237.

		20. 45
		s
Aug. 29	L	2·41
Oct. 5	Q	2·28

μ Aquarii.

		20. 45
		s
Sept. 13	Q	18·94

B.A.C. 7247.

		20. 46
		s
Aug. 13	Q	43·24

B.A.C. 7248.

		20. 47
		s
Aug. 9	Q	2·17
Sept. 30	L	2·47

32 Vulpeculæ.

	Obsr.	h. m.
		20. 48
		s
Aug. 6	Q	45 ·91
12	Q	45 ·79
16	Q	45 ·81
Sept. 21	Q	45 ·81
Oct. 6	Q	45 ·94
7	Q	45 ·85

B.A.C. 7255.

		20. 48
		s
Aug. 24	Q	51 ·83
Sept. 26	L	52 ·18

17 Delphini.

		20. 49
		s
Sept. 27	Q	10 ·28

B.A.C. 7263.

		20. 50
		s
Aug. 18	Q	3 ·68

33 Vulpeculæ.

		20. 52
		s
Aug. 10	Q	11 ·53

B.A.C. 7285.

		20. 53
		s
Aug. 6	Q	22 ·15
Oct. 5	Q	22 ·29

B.A.C. 7287.

		20. 53
		s
Sept. 5	Q	40 ·61
30	L	40 ·76

B.A.C. 7303.

		20. 55
		s
Sept. 13	Q	40 ·73

3 Equulei.

	Obsr.	h. m.
		20. 57
		s
Aug. 12	Q	48 ·13
Sept. 26	L	48 ·27

θ Capricorni.

		20. 58
		s
Aug. 18	Q	17 ·91
29	L	(17 ·54)
Sept. 19	Q	18 ·09
27	Q	17 ·84
29	Q	17 ·94
30	L	17 ·87
Oct. 3	Q	18 ·05
5	Q	17 ·81
6	Q	17 ·78
7	Q	17 ·94

A Capricorni.

		20. 59
		s
Aug. 13	Q	9 ·99
24	Q	10 ·16

26 Capricorni.

		21. 1
		s
Aug. 10	Q	30 ·01

ν Aquarii.

		21. 2
		s
Sept. 13	Q	10 ·90
Nov. 7	L	11 ·04

γ Equulei.

		21. 3
		s
Oct. 4	Q	43 ·78

ζ Cygni.

		21. 7
		s
Mar. 11	L	8 ·94
Sept. 21	Q	8 ·97
23	Q	8 ·96
Oct. 14	Q	8 ·95

φ Capricorni.

	Obsr.	h. m.
		21. 7
		s
Sept. 28	L	53 ·42

B.A.C. 7373.

		21. 7
		s
Aug. 12	Q	58 ·51

14 Aquarii.

		21. 8
		s
Aug. 10	Q	59 ·47

α Equulei.

		21. 9
		s
Sept. 29	Q	1 ·40
Oct. 6	Q	1 ·41

30 Capricorni.

		21. 10
		s
Aug. 29	L	19 ·45
Oct. 3	Q	19 ·33

15 Aquarii.

		21. 11
		s
Aug. 13	Q	2 ·75

16 Aquarii.

		21. 13
		s
Aug. 18	Q	56 ·29

ι Capricorni.

		21. 14
		s
Aug. 24	Q	40 ·18
Sept. 24	Q	40 ·21
26	L	40 ·30
30	L	40 ·19
Oct. 14	Q	40 ·28

α Cephei.

		21. 15
		s
Apr. 12	Q	19 ·70

18 Aquarii.

	Obsr.	h. m.
		21. 16
		s
Sept. 28	L	45 ·71

20 Aquarii.

		21. 17
		s
Aug. 29	L	46 ·38

B.A.C. 7463.

		21. 22
		s
Sept. 29	Q	21 ·39

B.A.C. 7473.

		21. 23
		s
Aug. 31	L	47 ·37

β Aquarii.

		21. 24
		s
Aug. 18	Q	23 ·81
Sept. 13	Q	23 ·87
24	Q	23 ·85

B.A.C. 7479.

		21. 24
		s
Aug. 26	Q	42 ·72
29	L	42 ·96

Groombridge 3548.

		21. 26
		s
Apr. 1	L	10 ·15
13	L	9 ·23

β Cephei.

		21. 26
		s
Mar. 24	Q	53 ·23

B.A.C. 7507.

		21. 29
		s
Oct. 5	Q	45 ·64

ξ Aquarii.

	Obsr.	h. m. 21. 30 s
Aug. 31	L	30·49
Sept. 13	Q	30·56
24	Q	30·55
Oct. 6	Q	30·64

B.A.C. 7528.

		21. 32 s
Aug. 26	Q	40·87

26 Aquarii.

		21. 35 s
Sept. 28	L	14·26

B.A.C. 7550.

		21. 35 s
Aug. 29	L	36·99
Sept. 29	Q	36·88

B.A.C. 7558.

		21. 36 s
Oct. 5	Q	50·09

ε Pegasi.

		21. 37 s
Mar. 11	Q	30·38
Sept. 23	Q	30·32
Oct. 24	L	30·22

c^1 Capricorni.

		21. 37 s
Aug. 31	L	45·12

c^2 Capricorni.

		21. 39 s
Sept. 26	L	0·87

δ Capricorni.

		21. 39 s
Sept. 24	Q	31·70
Oct. 31	L	31·75

B.A.C. 7599.

	Obsr.	h. m. 21. 42 s
Oct. 24	L	20·03

13 Pegasi.

		21. 43 s
Sept. 19	Q	40·58

B.A.C. 7616.

		21. 45 s
Sept. 26	L	39·50

B.A.C. 7617.

		21. 45 s
Aug. 29	L	44·02

B.A.C. 7620.

		21. 46 s
Aug. 24	Q	19·47
31	L	19·73

16 Pegasi.

		21. 46 s
Aug. 26	Q	52·54
Sept. 12	Q	52·52
23	Q	52·54
24	Q	52·47
28	L	52·26
29	Q	52·53
Oct. 31	L	52·63
Nov. 3	L	52·61
5	L	52·42

B.A.C. 7629.

		21. 47 s
Sept. 30	L	10·31

17 Pegasi.

		21. 50 s
Oct. 4	Q	18·48
24	L	18·73

B.A.C. 7649.

	Obsr.	h. m. 21. 51 s
Aug. 26	Q	8·37
Sept. 19	Q	8·31

18 Pegasi.

		21. 53 s
Nov. 3	L	20·39
4	L	20·42

O. A. (N. Z.) 23169.

		21. 53 s
Sept. 27	Q	44·27

28 Aquarii.

		21. 54 s
Sept. 26	L	7·43

19 Pegasi.

		21. 54 s
Oct. 31	L	24·26

B.A.C. 7675.

		21. 56 s
Aug. 31	L	52·42

α Aquarii.

		21. 58 s
Aug. 24	Q	47·84
Sept. 12	Q	47·82
13	Q	47·81
14	Q	47·92
24	Q	47·88
29	Q	47·81

B.A.C. 7697.

		22. 0 s
Nov. 4	L	3·35

ι Pegasi.

	Obsr.	h. m. 22. 0 s
Sept. 26	L	40·82
Oct. 5	Q	40·86
Dec. 5	Q	40·91

25 Pegasi.

		22. 1 s
Nov. 16	Q	27·09

B.A.C. 7709.

		22. 1 s
Aug. 26	Q	27·42

B.A.C. 7739.

		22. 4 s
Aug. 29	L	55·19

39 Aquarii.

		22. 5 s
Nov. 10	Q	5·67

B.A.C. 7742.

		22. 5 s
Nov. 4	L	17·51

B.A.C. 7752.

		22. 6 s
Oct. 3	Q	46·26

B.A.C. 7762.

		22. 8 s
Sept. 26	L	5·94

θ Aquarii.

		22. 9 s
Aug. 26	Q	39·18
Sept. 12	Q	39·31
13	Q	39·33
14	Q	39·19
19	Q	39·32
27	Q	39·30

θ Aquarii. (*concluded.*)

	Obsr.	h. m.
		22. 9
		s
Oct. 24	L	39·36
Nov. 4	L	39·55
8	L	39·35
Dec. 5	Q	39·33

B.A.C. 7793.

		22. 14
		s
Aug. 29	L	16·81
Sept. 26	L	16·84

γ Aquarii.

		22. 14
		s
Oct. 1	Q	38·00
3	Q	37·81
24	L	37·95
Nov. 3	L	37·83
4	L	37·70
5	L	37·74
8	L	37·86
10	Q	37·85
16	Q	37·86
Dec. 5	Q	37·74

B.A.C. 7804.

		22. 16
		s
Sept. 13	Q	23·93
28	L	(24·35)

B.A.C. 7809.

		22. 17
		s
Oct. 31	L	36·04

B.A.C. 7817.

		22. 18
		s
Sept. 5	Q	39·04
19	Q	39·18

54 Aquarii.

		22. 19
		s
Sept. 27	Q	28·21
Nov. 14	Q	28·11

56 Aquarii.

	Obsr.	h. m.
		22. 22
		s
Nov. 3	L	59·98

ζ Piscis Australis.

		22. 23
		s
Sept. 29	Q	19·87

σ Aquarii.

		22. 23
		s
Aug. 29	L	27·02
31	L	26·93
Sept. 13	Q	26·68
14	Q	26·83
26	L	26·87
30	L	26·85
Nov. 10	Q	26·91
16	Q	26·80

Groombridge 3820.

		22. 23
		s
Apr. 14	Q	36·78
18	L	39·69

B.A.C. 7861.

		22. 26
		s
Oct. 3	Q	56·55

η Aquarii.

		22. 28
		s
Sept. 5	Q	21·98
Oct. 1	Q	22·01

61 Aquarii.

		22. 28
		s
Sept. 19	Q	29·24

Radcliffe 5760.

		22. 28
		s
Apr. 2	Q	51·80

κ Aquarii.

	Obsr.	h. m.
		22. 30
		s
Nov. 18	Q	42·69

40 Pegasi.

		22. 32
		s
Sept. 30	L	17·87

B.A.C. 7899.

		22. 33
		s
Sept. 29	Q	6·57

41 Pegasi.

		22. 33
		s
Oct. 5	Q	11·76
28	L	11·76

ζ Pegasi.

		22. 34
		s
Oct. 7	Q	40·76
Nov. 14	Q	40·79
16	Q	40·82

B.A.C. 7920.

		22. 36
		s
Sept. 5	Q	6·18
Nov. 3	L	(6·70)

g^1 Aquarii.

		22. 36
		s
Dec. 5	Q	15·78

20 Piscis Australis.

		22. 38
		s
Nov. 18	Q	4·49

B.A.C. 7935.

		22. 38
		s
Sept. 27	Q	11·93
28	L	12·26
Oct. 1	Q	11·85
3	Q	11·93

τ^1 Aquarii.

	Obsr.	h. m.
		22. 40
		s
Sept. 19	Q	29·62

μ Pegasi.

		22. 43
		s
Oct. 7	Q	26·49

B.A.C. 7964.

		22. 44
		s
Sept. 30	L	(38·60)
Dec. 5	Q	38·09

λ Aquarii.

		22. 45
		s
Oct. 3	Q	30·87
5	Q	31·04
24	L	30·98
Nov. 14	Q	31·01
16	Q	31·05
18	Q	31·05

B.A.C. 7977.

		22. 46
		s
Sept. 27	Q	55·61
28	L	55·76
Oct. 28	L	55·72

75 Aquarii.

		22. 46
		s
Sept. 19	Q	56·50

Fomalhaut.

		22. 50
		s
Oct. 1	Q	7·71

B.A.C. 7993.

		22. 50
		s
Dec. 5	Q	14·70

B.A.C. 8001.

	Obsr.	h. m.
		22. 51
		s
Sept. 5	Q	41·41

52 Pegasi.

		22. 52
		s
Sept. 29	Q	23·65

B.A.C. 8007.

		22. 52
		s
Nov. 14	Q	43·84

B.A.C. 8017.

		22. 54
		s
Oct. 7	Q	29·39

B.A.C. 8019.

		22. 54
		s
Sept. 26	L	48·09
28	L	48·25
Nov. 16	Q	48·00

82 Aquarii.

		22. 55
		s
Nov. 18	Q	28·79

β Piscium.

		22. 56
		s
Dec. 5	Q	57·30
6	Q	57·33

α Pegasi.

		22. 57
		s
Apr. 13	Q	59·25
18	Q	59·12
Sept. 27	Q	59·15
Nov. 22	Q	59·28

c^1 Aquarii.

		22. 59
		s
Oct. 1	Q	22·20

A Piscium.

	Obsr.	h. m.
		23. 1
		s
Nov. 26	Q	43·02

B.A.C. 8065.

		23. 2
		s
Oct. 31	L	26·08

57 Pegasi.

		23. 2
		s
Oct. 7	Q	39·67
Nov. 18	Q	39·54
24	Q	39·58

58 Pegasi.

		23. 3
		s
Nov. 5	L	10·64

W.B. (2) xxiii. 61.

		23. 4
		s
Oct. 28	L	36·21

* N.P.D. 62° 47′.

		23. 5
		s
Nov. 14	Q	10·03

B.A.C. 8091.

		23. 8
		s
Sept. 19	Q	19·73

61 Pegasi.

		23. 9
		s
Oct. 3	Q	7·81
31	L	8·13

B.A.C. 8099.

		23. 9
		s
Nov. 22	Q	25·55

γ Piscium.

	Obsr.	h. m.
		23. 10
		s
Sept. 14	Q	6·84
29	Q	6·84
Nov. 3	L	6·92
5	L	6·91
18	Q	6·83
24	Q	6·85
26	Q	6·89
Dec. 5	Q	6·89
6	Q	6·96

B.A.C. 8129.

		23. 13
		s
Nov. 8	L	40·27

66 Pegasi.

		23. 16
		s
Sept. 26	L	13·15

B.A.C. 8152.

		23. 16
		s
Nov. 14	Q	33·36
26	Q	33·21

B.A.C. 8155.

		23. 16
		s
Nov. 22	Q	54·03

B.A.C. 8167.

		23. 19
		s
Sept. 27	Q	25·02

κ Piscium.

		23. 19
		s
Sept. 14	Q	57·61
Oct. 3	Q	57·58
31	L	57·70
Nov. 8	L	57·64
18	Q	57·61
24	Q	57·71

69 Pegasi.

	Obsr.	h. m.
		23. 20
		s
Sept. 19	Q	55·24
Oct. 24	L	(55·64)
Nov. 16	Q	55·10

B.A.C. 8175.

		23. 21
		s
Oct. 7	Q	0·30
Nov. 3	L	0·55

12 Piscium.

		23. 22
		s
Sept. 26	L	32·12

b^3 Aquarii.

		23. 24
		s
Nov. 5	L	34·25

B.A.C. 8199.

		23. 25
		s
Nov. 26	Q	9·51

72 Pegasi.

		23. 27
		s
Sept. 28	L	12·60

Radcliffe 6117.

		23. 27
		s
Apr. 12	Q	14·68

Groombridge 4101.

		23. 27
		s
Apr. 20	L	52·73

15 Piscium.

		23. 28
		s
Sept. 27	Q	31·38
Nov. 3	L	31·62
4	L	31·44

B.A.C. 8216.

	Obs^r.	h. m.
		23. 29
		s
Oct. 7	Q	0·76
Nov. 22	Q	0·74

ι Piscium.

		23. 32
		s
Sept. 24	M	57·27
Nov. 24	Q	57·25
26	Q	57·30
Dec. 6	Q	57·34

B.A.C. 8234.

		23. 32
		s
Sept. 26	L	59·48
Oct. 3	Q	59·18

B.A.C. 8247.

		23. 35
		s
Sept. 28	L	39·00
30	L	38·97

76 Pegasi.

		23. 35
		s
Oct. 5	Q	49·72
Nov. 4	L	49·88

77 Pegasi.

		23. 36
		s
Sept. 27	Q	27·07
Oct. 31	L	27·12

B.A.C. 8257.

	Obs^r.	h. m.
		23. 37
		s
Sept. 29	Q	52·60

B.A.C. 8266.

		23. 40
		s
Oct. 7	Q	15·44
24	L	(15·89)

B.A.C. 8272.

		23. 41
		s
Oct. 3	Q	15·24

δ Sculptoris.

		23. 41
		s
Nov. 20	Q	50·22
24	Q	50·22
26	Q	50·30
Dec. 6	Q	50·22

21 Piscium.

		23. 42
		s
Nov. 5	L	29·99

108 Aquarii.

		23. 44
		s
Oct. 31	L	19·97

80 Pegasi.

		23. 44
		s
Sept. 24	M	24·79
28	L	25·12

B.A.C. 8297.

	Obs^r.	h. m.
		23. 45
		s
Nov. 18	Q	30·60

82 Pegasi.

		23. 45
		s
Nov. 8	L	41·04

B.A.C. 8304.

		23. 46
		s
Sept. 27	Q	18·64

B.A.C. 8308.
(2nd star.)

		23. 47
		s
Nov. 5	L	19·62

ψ Pegasi.

		23. 50
		s
Oct. 7	Q	49·82

ω Piscium.

		23. 52
		s
Sept. 24	M	19·68
26	L	19·57
28	L	19·74
Oct. 1	Q	19·59
31	L	19·87
Nov. 3	L	19·47
4	L	19·55
10	Q	19·82
20	Q	19·59
Dec. 6	Q	19·62

B.A.C. 8332.

	Obs^r.	h. m.
		23. 52
		s
Nov. 26	Q	28·29

B.A.C. 8335.

		23. 52
		s
Nov. 24	Q	50·42

B.A.C. 8337.

		23. 53
		s
Sept. 27	Q	26·86
Oct. 24	L	(27·29)

c² Piscium.

		23. 55
		s
Sept. 24	M	32·67
Nov. 5	L	32·94

2 Ceti.

		23. 56
		s
Nov. 18	Q	46·18

B.A.C. 8360.

		23. 57
		s
Sept. 30	L	21·65
Oct. 31	L	21·79

B.A.C. 8365.

		23. 58
		s
Sept. 26	L	5·43
Oct. 5	Q	5·44

Jan. 1. The stars hazy and unsteady.
2. The stars very unsteady.
3. ☽ 2 L.
f Boötis —Unsteady.
α Libræ
ξ^2 Libræ —Faint.
Jupiter
Venus—Unsteady.
4. ⊙ 1 L.—Unsteady.
B.A.C. 1102—Faint.
5. ⊙ 2 L.—Observed over 4 wires only.
Mercury—Hardly dircernible.
6. 12 Ceti—Very unsteady.
B.A.C. 371
41 Ceti
67 Ceti —Faint.
Radcliffe 713
B.A.C. 1102
5 Orionis —Very unsteady.
66 Eridani
8. Groombridge 559—Faint; observed over 3 wires only.
26 Arietis
81 Ceti —Faint.
B.A.C. 1186
ο Tauri—Unsteady.
16. ☽ —Faint.
π Arietis
ε Arietis—Unsteady.
Groomb. 750
Radc. 3523, S.P. —Very faint.
ε Tauri
19. ⊙—Very faint.
21. τ^1 Arietis—Very faint.
ε Eridani
δ Eridani —Faint.
Groomb. 750
Radc. 3523, S.P.
25. γ Eridani —Faint.
ω^1 Tauri
o^1 Eridani —Cloudy.
γ Tauri
α Ophiuchi—Observed over 4 wires only.
27. δ Ophiuchi—Hazy.
λ Ophiuchi —Unsteady.
Venus
28. ⊙—High wind; cloudy.
29. ο Tauri—Unsteady.
Groombridge 750—Very unsteady.
B.A.C. 2600—Faint.

Jan. 30. B.A.C. 1281 —Very faint.
B.A.C. 2731
W.B. (1) viii. 425—Faint.
B.A.C. 2868—Very unsteady.
Feb. 3. ε Eridani
44 Geminorum —Hazy.
51 Geminorum
η Canis Minoris
68 Geminorum —Jumping.
B.A.C. 2537
10 Puppis —Hazy.
f Mali
Venus—Very unsteady.
4. ψ Tauri—A train running.
B.A.C. 1423 —Very faint.
B.A.C. 1488
5. B.A.C. 2387 —Cloudy.
B.A.C. 2432
β Canis Minoris—Observed over 4 wires only.
6 Cancri
β Cancri —Cloudy.
Radc. 4894
8. The stars very unsteady.
9. B.A.C. 1443—Bells ringing.
B.A.C. 1997—Faint.
δ Ursæ Minoris, S.P.—Observed over 3 wires only.
η Cancri—Very unsteady.
B.A.C. 3103—Hazy.
Venus—Unsteady.
10. ⊙—Very unsteady.
ε Leporis —Cloudy; faint.
B.A.C. 1601
13. B.A.C. 1564—Hardly visible.
B.A.C. 1643—Cloudy; faint.
B.A.C. 1787—Hazy and unsteady.
14. α Ceti
δ Arietis —Cloudy; faint.
ε Eridani
☽
15. δ^1 Tauri
ε Tauri —Cloudy; faint.
☽
16. ⊙ 2 L.—Observed over 3 wires only.
B.A.C. 1711
☽
κ Orionis —Cloudy.
α Orionis
χ^2 Orionis

Feb. 16. ν Orionis—Observed over 4 wires only.
δ Ursæ Minoris, S.P.—Cloudy.
B.A.C. 2841—Cloudy; faint.
β Lyræ, α Aquilæ—Faint.

17. 18 Orionis—Jumping.
B.A.C. 1783—Hazy.

18. B.A.C. 1526—Unsteady.
B.A.C. 1564—Ill-defined.
Rigel—Cloudy; faint.
B.A.C. 1893—Unsteady.
4 Geminorum—Faint.
Cephei 51 (Hev.)—Very faint; observed over 3 wires only.
☽—Cloudy.

23. 4 Geminorum—Faint; filmy.
δ Ursæ Min., S.P., Cephei 51 (Hev.)—Cloudy.

Mar. 1. ι Aurigæ—Unsteady.
B.A.C. 1967—Very faint; a bell ringing.
Radcliffe 3900—Faint.
m Puppis—Hardly observable.
B.A.C. 3292—Hazy.
γ Leonis—Ill-defined.
B.A.C. 3561—Very faint and ill-defined.

4. The night hazy.
6 Monocerotis, B.A.C. 2057, 22 Geminorum, 24 Monocerotis—Faint.

10. ☉—Very faint.
α Orionis—Very unsteady.
δ Ursæ Minoris, S.P.—Very faint.
Cephei 51 (Hev.)—Cloudy.

11. θ Antliæ, Groomb. 3820, S.P.—Hazy.
p^4 Leonis, 76 Leonis—Unsteady.
ζ Cygni—High wind; clock scarcely audible.
Venus—Fluttering.
ε Pegasi—Observed over 4 wires only.

12. κ Orionis—Unsteady.
B.A.C. 2587—Filmy.
B.A.C. 2888—Cloudy.
W.B. (2) xi. 100, B.A.C. 3884—Very faint.

15. ζ Cygni—Observed over 3 wires only.
ε Pegasi—Very faint.
Mercury—Observed over 4 wires only.

16. ☉—Very unsteady.
α Androm.—Observed over 2 wires only.
μ Geminorum, δ Ursæ Min., S.P., γ Geminorum, Cephei 51 (Hev.), ☽—Faint.
B.A.C. 3937—Unsteady.

Mar. 17. B.A.C. 3296—Very unsteady and diffused.
B.A.C. 3340—Very unsteady.
π Leonis—Unsteady.
B.A.C. 3521—Ill-defined.

18. ☉—Very unsteady.
Groomb. 3820, S.P., 34 Sextantis—Hazy.
B.A.C. 3795, B.A.C. 3845—Unsteady.
ω Virginis—Very unsteady.

19. Polaris, λ Ursæ Min., S.P., ☽—Very unsteady.

20. 36 Sextantis—Observed over 2 wires only.

23. B.A.C. 3823—Faint.
71 Leonis—Cloudy.
A^2 Leonis, B.A.C. 4069, 3 Comæ, 13 Virginis, q Virginis—Unsteady.
50 Virginis, 58 Virginis—Very unsteady.
Mercury—Very faint; observed over 3 wires only.

24. ☉—Ill-defined.
Radcliffe 2162—Very faint.
ε Hydræ—Very unsteady.
83 Cancri—Very faint.
B.A.C. 3649—Hardly visible.
B.A.C. 3737—Faint.

29. π Leonis, 33 Leonis—Faint.
B.A.C. 3521—Hardly observable.
B.A.C. 3592—Unsteady.
B.A.C. 4204—Great noise at railway.
After this time the stars very unsteady.

30. 12 Puppis—Hazy; a bell ringing.
β Cancri—Clouds passing.
B.A.C. 3948—Faint.
B.A.C. 4032—Hazy.
B.A.C. 4336—Faint.
Saturn, 63 Virginis—Unsteady.

31. α Pegasi—Very faint; observed over 3 wires only.
Venus—Very unsteady.

April 1. ☉ 2 L.—Cloudy.
Polaris—Cloudy; observed over 3 wires only.
α Arietis—Faint and tremulous.
ο Leonis—Hazy.
Radcliffe 2404, π Leonis, γ Leonis, d Leonis—Cloudy.
δ Crateris—Hazy.

April 1. 35 Virginis—Cloudy.
Polaris, S.P.—Observed over 3 wires only.
ζ Virginis—Very hazy.

2. The stars very unsteady.
⊙ 2 L.
Polaris } —Cloudy.
18 Sextantis—Very faint.
B.A.C. 3553
Radc. 5760, S.P. } —Cloudy; faint.
δ Crateris

4. ⊙ 1 L.—Cloudy.

11. ζ Tauri—Cloudy; faint.
μ Geminorum—Observed over one wire only.
δ Geminorum—Observed over 3 wires only.
Groomb. 3548, S.P.
Radcliffe 2507 } —Scarcely visible.
Venus—Hardly observable.
α Andromedæ—Very faint; observed over 4 wires only.

12. The stars very unsteady.
Mercury—Observed over 4 wires only.
ζ Geminorum—Very faint.
λ Geminorum—Observed over 3 wires only.

13. ⊙ 2 L.—Observed over 4 wires only.
ζ Geminorum
g Geminorum } —Faint.
35 Cancri
12 Virginis—Unsteady.
δ Corvi—Hazy.
α Pegasi—Observed over 3 wires only.

14. *g* Geminorum—Observed over one wire only.
Polaris, S.P.—Extremely unsteady.
Venus, 2 L.—Observed over 3 wires only.

15. ⊙ 2 L.—Cloudy.

17. α Pegasi
α Andromedæ } —Faint and unsteady.
Venus—Very unsteady.
Polaris—Observed over 3 wires only.

18. ⊙ 1 L.—Cloudy; observed over 3 wires only.
α Pegasi—Very faint.

19. ⊙—High wind; the clock hardly audible.
Mercury—Very faint.

20. B.A.C. 3774—Faint.
Groombridge 1871—Cloudy.
☽—Unsteady.
Polaris, S.P.—Observed over 4 wires only.
Spica—Hazy.
h Virginis—Unsteady.
B.A.C. 4840—Faint.
Polaris—Hardly visible.

April 21. δ Antliæ—Unsteady.
45 Leonis Minoris—Wire iii diminished by 1^s.
2 Comæ (2)
β Corvi
☽ } —Very unsteady.
B.A.C. 4800
B.A.C. 4838—The observed transit has been increased by 1^s.
Polaris—Very unsteady.

22. ⊙
Mercury } —Very unsteady.
B.A.C. 3521—Hazy.
B.A.C. 3799—Faint.
92 Virginis
B.A.C. 4694
κ Virginis
λ Virginis } —Unsteady.
2 Libræ
ψ Boötis
γ Libræ
κ Libræ

23. ⊙—Great undulation.
Mercury—Very unsteady.
B.A.C. 3823—Faint.
B.A.C. 4680—A thick haze.

24. Venus—Very pale and indistinct.

25. ⊙—Great undulation.
Mercury—Hardly discernible.
p^2 Leonis—Jumping.
ε Corvi—Hazy.

28. B.A.C. 4116—Very faint.

29. ⊙—Very unsteady.
B.A.C. 3828—Faint.
Radcliffe 6099, S.P.—Observed over 3 wires only.
Saturn—Very hazy.
ζ Virginis—Hazy.
B.A.C. 4621—Wire ii diminished by 1^s.

May 5. θ Virginis—Faint.

7. β Leonis—Unsteady.
Groombridge 67, S.P.—Hazy.
B.A.C. 4771—Unsteady.
B.A.C. 4857—Very unsteady.

13. Groomb. 67, S.P.
B.A.C. 4225 } —Faint.
35 Virginis
B.A.C. 4771
ε Boötis } —Unsteady.
B.A.C. 4997—Faint.
Venus—Very pale and indistinct.

14. *d* Leonis—Hardly visible; observed over 4 wires only.
δ Leonis
δ Crateris } —Thin clouds.
β Leonis—A railway train running; the clock inaudible.
β Libræ—Cloudy; faint.

May 18. ε Corvi—Very hazy.
B.A.C. 4136—Faint.
δ Corvi, λ Virginis—The gaslight flickering.
19. ☉—Indistinct.
20. ☉—Great undulation.
Jupiter, ☽—Very unsteady.
21. ☉—Great undulation.
23. Venus—Ill-defined and unsteady.
24. Saturn—Very unsteady and ill-defined.
B.A.C. 4455—Hardly visible.
All the stars very unsteady.
25. 35 Virginis—Wire ii increased by 1^s.
26. Venus—A shapeless mass.
27. 56 Virginis—Faint.
Venus—Cloudy.
30. 35 Virginis—Hardly visible.
June 1. ☉—Very unsteady and ill-defined.
ξ^1 Libræ, ε Serpentis—Faint.
δ Ophiuchi—Hardly visible.
2. ☉—Unsteady and ill-defined.
3. 14 Libræ—Very faint.
γ Herculis—Very unsteady and ill-defined.
Venus—Observed over one wire only.
5. Venus—Observed over one wire only.
6. η Boötis—Unsteady.
Radc. 745, S.P.—Observed over 3 wires only.
7. B.A.C. 4750, B.A.C. 4863—Very faint.
8. ☉ 1 and 2 L.—Observed over 3 and 2 wires respectively; great undulation.
10. ξ^2 Libræ, Jupiter—Faint and unsteady.
11. ☉ 1 and 2 L.—Observed over 2 wires and one wire respectively.
Jupiter—Cloudy; observed over 3 and 2 wires respectively.
13. 3 Libræ—Faint and unsteady.
B.A.C. 5167—Faint; cloudy.
B.A.C. 5687—Faint and unsteady.
15. The stars very unsteady.
16. ☉—Great undulation.
λ Virginis—Faint.
☽, Jupiter—Cloudy.
Groomb. 750, S.P.—Observed over 3 wires only.
B.A.C. 5737—Faint.
17. Venus—High wind; clock inaudible.
18. ☉—High wind.
19. Venus—Unsteady.
20. ☉—Very unsteady and indistinct.
21. ☉—Cloudy; 1 L. observed over 3 wires only.

June 21. B.A.C. 4941—Faint.
Antares, B.A.C. 5563—Cloudy; very unsteady.
B.A.C. 5737—Faint.
23. Jupiter—Cloudy.
27. ψ Boötis—A train running; clock scarcely audible.
o^2 Libræ—Noise.
τ^7 Serpentis—Cloudy.
30. Jupiter—Faint and ill-defined.
ζ Libræ, α Coronæ, α Serpentis—Cloudy.
δ Ophiuchi, ζ Ophiuchi—Observed over 3 wires only.
July 2. ☉—High wind; clock hardly audible.
Radc. 1272, S.P.—Faint.
4. B.A.C. 5641, B.A.C. 5920—Very faint.
μ Herculis—Unsteady.
Mercury—Very indistinct.
Venus—Unsteady and ill-defined.
5. Jupiter—Very pale and indistinct.
B.A.C. 6303—Very unsteady.
6. ε Herculis, σ Ophiuchi—Cloudy; faint.
Sirius—Cloudy; observed over 2 wires only.
Venus—Observed over 3 wires only.
9. ☉—Great undulation.
11. ☽, α Serpentis—Very faint.
12. Spica—Very faint; observed over 4 wires only.
☽—Very ill-defined.
33 Herculis—Faint; very hazy.
B.A.C. 5774—Faint.
β Lyræ—Cloudy.
13. B.A.C. 5671—Very faint.
B.A.C. 5909—Faint.
ξ^1 Sagittarii—Very unsteady.
14. B.A.C. 5600—Faint.
B.A.C. 5927—A thick haze.
ε Aquilæ—Very unsteady.
A thick haze all the night.
16. λ Ophiuchi, 51 Herculis—Faint.
θ Ophiuchi—Very faint.
68 Ophiuchi—Faint.
μ Sagittarii—Hardly visible.
δ Ursæ Minoris—Hardly visible; observed over 3 wires only.
B.A.C. 6574—Very faint.
The night very hazy.
19. ζ Herculis—Faint.
B.A.C. 5663—Hardly observable.
α Herculis—Faint.
δ Ursæ Minoris—Unsteady.

July 19. Cephei 51, S.P.—Unsteady.
α Vulpeculæ—Faint.
h^2 Sagittarii—Very faint.

20. ⊙—Great undulation.
B.A.C. 5634—Faint; daylight.
η Ophiuchi—Very unsteady.
B.A.C. 5989—Faint.
Cephei 51, S.P.—Very unsteady.

21. ⊙—Great undulation.
B.A.C. 5880—Very faint.
56 Ophiuchi—Faint.
B.A.C. 6513—Very faint.

23. 89 Herculis—Faint.
δ Ursæ Minoris
Cephei 51, S.P. —Observed over 3 wires only.
B.A.C. 6651—Faint.
45 Aquilæ—Cloudy.
β Aquilæ—Faint.

27. Mercury—Observed over one wire only.

29. B.A.C. 6023—Hazy and cloudy.
B.A.C. 6850—Very unsteady.

30. The night very hazy.
ζ Aquilæ
B.A.C. 6560 —Unsteady and faint.
h^2 Sagittarii—Faint.

Aug. 1. β Ophiuchi—Very unsteady.
B.A.C. 6054—Great noise at the railway station.
μ Sagittarii—Cloudy; unsteady.
δ Ursæ Minoris—Very unsteady.
Cephei 51, S.P.
d Sagittarii —Cloudy.
B.A.C. 6695—Faint.

3. ⊙—Great undulation.
Venus—Observed over one wire only.
ζ Herculis—Cloudy; faint.

5. Venus—Ill-defined and unsteady.

6. Venus—Cloudy; observed over 4 wires only.
Mercury—Cloudy; observed over 3 wires only.
μ Sagittarii—A thick haze.
33 Sagittarii—Faint.
B.A.C. 6850
B.A.C. 7172 —Very faint.

8. Venus—Very unsteady; observed over 3 wires only.
Mercury—Observed over one wire only.
κ Ophiuchi—Observed over 4 wires only.
μ Sagittarii—A train running.
Cephei 51, S.P.—Observed over 4 wires only.

9. ζ Aquilæ—Observed over 3 wires only.
χ^1 Sagittarii—Very unsteady and ill-defined.
θ Aquilæ—Very unsteady.

10. Cephei 51, S.P.—Observed over 3 wires only.

Aug. 10. ζ Aquilæ—Very high wind.
ω Aquilæ—Very unsteady.
B.A.C. 7180—Very faint.

11. Venus—Observed over 4 wires only.
Mercury—Faint.
γ Serpentis—Very faint.

12. ⊙—Faint.
Mercury—A very uncertain observation.
☽—Cloudy; very unsteady.
B.A.C. 6041—Very faint.

13. Venus—Ill-defined and unsteady.

15. Venus—Ill-defined and unsteady.

16. ⊙—Cloudy; faint.
δ Ursæ Minoris—A thick haze.
Cephei 51 (Hev.)
19 Lyræ —Faint.
25 Vulpeculæ
32 Vulpeculæ—Very faint.

18. Venus—Ill-defined and unsteady.
72 Ophiuchi—Very unsteady.
δ Ursæ Minoris—Observed over 3 wires only.
ζ Aquilæ—Flaring.
α Vulpeculæ—Very unsteady.
B.A.C. 6761—Cloudy; faint.

19. ⊙ 1 and 2 L.—Observed over 4 and 2 wires respectively.

20. 72 Ophiuchi—Ill-defined and unsteady.
α Lyræ—Cloudy.
ψ Sagittarii—Faint.
46 Aquilæ—Unsteady.
λ Ursæ Minoris—Very unsteady; observed over 3 wires only.

23. β Ophiuchi—High wind.

24. ⊙ 2 L.—Cloudy.
λ Ursæ Minoris—Observed over 3 wires only.
Radcliffe 2189, S.P.—Very faint and unsteady.
α Aquarii—A thick haze.
The stars very unsteady.

26. ⊙ 2 L.—Cloudy; observed over 3 wires only.
Venus—Cloudy; observed over 4 wires only.
B.A.C. 6294—Jumping.
ψ Sagittarii—Very faint.
λ Ursæ Minoris—Faint.
B.A.C. 7034—Hardly discernible.

29. Venus—Observed over one wire only.
89 Herculis—Bell ringing.

30. ⊙—High wind; clock inaudible.
Venus—High wind.
Mercury—Very faint.
B.A.C. 6173
B.A.C. 6295 —Faint.
B.A.C. 6422
ψ Sagittarii—Jumping.

Aug. 30. B.A.C. 6677—Faint.
λ^2 Sagittarii—Unsteady.
B.A.C. 7030—Faint.
θ Capricorni—Unsteady.
31. B.A.C. 6401 } B.A.C. 6450 }—Faint.
c Sagittarii—Hazy.
B.A.C. 6920—Faint.
ρ Capricorni—Hazy.
B.A.C. 7473—Faint.
ξ Aquarii—Hazy.
δ Ursæ Minoris, S.P.—Faint.
Sept. 1. β Lyræ—Cloudy.
5. ☉ 2 L.—Cloudy; observed over 2 wires only.
B.A.C. 6450—Cloudy; observed over 4 wires only.
B.A.C. 6814—Hardly observable.
η Aquarii—Very unsteady.
B.A.C. 7920—Unsteady.
B.A.C. 8001—Difficult to observe.
8. ☉ 1 and 2 L.—High wind; clock hardly audible; observed over one and 4 wires respectively.
9. 2 Aquilæ—A bell ringing; clock hardly audible.
β Lyræ } ψ Sagittarii } δ Aquilæ }—Cloudy.
13. ξ Aquarii } B.A.C. 7804 }—Faint.
14. Radcliffe 2612, S.P.—Observed over 3 wires only.
17. γ Aquilæ } α^2 Capricorni }—Cloudy.
19. 45 Aquilæ—Cloudy.
λ Ursæ Minoris—Unsteady.
Groombridge 1418, S.P.—Faint.
θ Aquarii—Very unsteady.
61 Aquarii—Filmy.
21. 32 Vulpeculæ—Faint.
ζ Cygni—Noise from a bell and railway train.
23. ζ Cygni—Cloudy.
ϵ Pegasi—Faint.
16 Pegasi—Faint; clock hardly audible.
24. B.A.C. 6627—Very faint; observed over 2 wires only.
B.A.C. 6854—Observed over 4 wires only.
δ Capricorni—Very unsteady.
26. The stars moving by jumps.
* N.P.D. 118° 48′ } B.A.C. 7170 }—Faint.
27. Venus—Hazy; very pale.
θ Capricorni } α Pegasi }—Very unsteady.
28. Venus—Fluttering.

Sept. 28. B.A.C. 6576 } B.A.C. 6641 }—Faint.
λ^2 Sagittarii—Jumping.
B.A.C. 6987—Faint.
ϵ Aquarii—Hazy.
18 Aquarii—Unsteady.
29. Venus—Very pale and fluttering.
ζ Piscis Australis—Very faint.
30. Spica—Very faint.
B.A.C. 7287—Hazy.
B.A.C. 7629 } 40 Pegasi }—Unsteady.
B.A.C. 8247—Very unsteady.
γ Ursæ Majoris, S.P.—Hazy and unsteady.
B.A.C. 8360 } ι Ceti }—Unsteady.
Oct. 1. B.A.C. 7935—Faint.
Fomalhaut } α Andromedæ }—Very unsteady.
3. Venus, 1 L.—High wind; clock inaudible.
α Delphini—Very unsteady.
B.A.C. 7232—Cloudy; observed over 4 wires only.
30 Capricorni—Cloudy.
4. The stars very unsteady.
☉—Great undulation.
o Capricorni } B.A.C. 7159 }—Hardly observable.
5. The stars very unsteady.
☉—Great undulation.
Venus—Very unsteady.
6. Venus—Very unsteady.
η Ophiuchi—Faint.
7. B.A.C. 190—Very unsteady.
14. ζ Cygni—Faint.
Groombridge 1923, S.P.—Cloudy; observed over 4 wires only.
☽—Cloudy; hardly discernible.
Mercury—Faint.
24. A foggy night; the stars very unsteady.
ϵ Pegasi—A bell ringing.
26. ☉—Cloudy.
28. ϵ Pegasi—Cloudy.
31. 41 Ceti—Cloudy; observed over 4 wires only.
105 Piscium } 4 Arietis }—Very unsteady.
Nov. 2. Mercury—Very faint; observed over 3 wires only.
3. ☉ 1 L.—Observed over 4 wires only.
18 Pegasi—Observed over 4 wires only.
γ Piscium—Unsteady.
B.A.C. 190—Faint.
B.A.C. 430—Observed over 4 wires only.
ν Piscium—Very unsteady.
4. A hazy night; the stars appeared small.

Nov. 4. θ Aquarii—A bell ringing.
36 Piscium—Jumping.
5. Groomb. 3820—Very faint; observed over 4 wires only.
b^3 Aquarii—Jumping.
7. Foggy—The stars faint.
☽—Cloudy.
8. B.A.C. 8129—Very hazy.
κ Piscium—Unsteady.
B.A.C. 43—Very hazy.
51 Piscium—Unsteady.
10. Venus—Cloudy; observed over 4 wires only.
Radcliffe 6172—Observed over 4 wires only.
B.A.C. 722—Unsteady.
12. ☉ 1 L.—Cloudy; very faint; observed over 3 wires only.
β Arietis
ξ^2 Ceti } —Faint.
☽ 2 L.—Ill-defined; observed over 3 wires only.
14. ☉ 1 L.—Cloudy; observed over 2 wires only.
B.A.C. 8007—Unsteady.
* N.P.D. 62° 47′
B.A.C. 8152 } —Hazy.
12 Ceti—Very hazy.
B.A.C. 190—A train running; clock scarcely audible.
16. ☉—Cloudy; observed over 4 wires only.
25 Pegasi—Filmy.
σ Aquarii—Great noise from railway trains; observed over 4 wires only.
λ Aquarii—Observed over 4 wires only.
B.A.C. 8019—Cloudy; faint.
Groomb. 1871, S.P.—Very foggy.
Polaris—Observed over 3 wires only.
α Arietis—Faint.
67 Ceti—Very faint; observed over 4 wires only.
17. Polaris—Observed over 4 wires only.
18. B.A.C. 8297—Very unsteady and ill-defined.
2 Ceti
ι Ceti } —Ill-defined.
Polaris—Very unsteady.
22. β Ceti—High wind.
100 Piscium—Faint.
14 Arietis—Counted 1^s too slow.
24. A thick mist.
δ Sculptoris
B.A.C. 8335 } —Very faint.
ε Andromedæ—Cloudy; faint.
47 Ceti—Cloudy.

Nov. 25. β Ursæ Minoris—Observed over 3 wires only.
26. ☉ 1 and 2 L.—Faint; observed over 3 and 4 wires respectively.
Polaris—Observed over 3 wires only.
B.A.C. 549—Unsteady.
28. B.A.C. 375
π Arietis } —Faint.
υ^1 Tauri—Cloudy.
29. A thick mist.
12 Ceti—Very faint.
Groomb. 2006, S.P.—Very faint; observed over 4 wires only.
10 Trianguli—Noise; observed over 4 wires only.
ρ^1 Arietis
δ Arietis
δ Eridani } —Cloudy.
30. α Ceti—Ill-defined.
Dec. 1. The stars hazy and unsteady.
5. ☽—Unsteady.
g^1 Aquarii—Very unsteady.
6. ☉—Cloudy; hardly visible.
β Piscium—Very hazy.
δ Sculptoris—Unsteady.
Groomb. 1940, S.P.
Polaris } —Observed over 3 wires only.
8. δ Piscium—Cloudy.
β Andromedæ
☽ } —Faint.
η Piscium—Very faint.
γ Tauri—Hardly observable; observed over 3 wires only.
Mars, 1 and 2 L.—Observed over 2 and 3 wires respectively.
12. Polaris—Unsteady.
Groomb. 2007, S.P.—Observed over 3 wires only.
γ Ceti—Clouds passing.
52 Arietis—Hazy.
Mars, 1 L. and 2 L.—Observed over 3 and 2 wires respectively.
ε Tauri—Observed over 2 wires only.
☽ 2 L.—Observed over 3 wires only.
13. α Arietis—Very faint.
α Orionis—Cloudy; observed over 4 wires only.
16. ξ^2 Ceti—Cloudy; observed over 4 wires only.
δ Ceti
γ Ceti } —Cloudy.
α Ceti—Faint; observed over 3 wires only.
20. α Herculis
α Ophiuchi } —Faint.
21. ☉ 2 L.—Observed over 2 wires only.

RADCLIFFE OBSERVATORY,

OXFORD.

SEPARATE RESULTS

FOR

MEAN N.P.D. OF STARS

OBSERVED IN THE YEAR

1864.

5 Ceti.

	Obsr.	° ′ 93. 12
Oct. 7	Q	″ 17·27

α Andromedæ.

		61. 39
Sept. 29	Q	″ 35·84
Oct. 1	Q	37·11
Reflexion.		
Sept. 29	Q	38·94

B.A.C. 5.

		92. 58
Sept. 27	Q	″ 45·88
Oct. 24	L	45·91

B.A.C. 12.

		93. 19
Nov. 10	Q	″ 4·91

B.A.C. 17.

		96. 0
Nov. 26	Q	″ 16·89

γ Pegasi.

		75. 34
Oct. 5	Q	″ 19·91
14	Q	21·00

χ Pegasi.

		70. 33
Oct. 24	L	″ 0·28

B.A.C. 35.

		100. 19
Oct. 7	Q	″ 31·87
Nov. 3	L	34·15

B.A.C. 42.

		86. 30
Sept. 27	Q	″ 17·33
30	L	20·27

B.A.C. 43.

	Obsr.	° ′ 122. 12
Nov. 8	L	″ 5·17

36 Piscium.

		82. 30
Nov. 4	L	″ 57·21

ι Ceti.

		99. 34
Jan. 8	L	″ 42·40
Oct. 1	Q	40·80
5	Q	40·70
Nov. 4	L	42·48
14	Q	42·78
17	Q	41·12
18	Q	41·10
29	Q	35·81
Dec. 1	L	43·50

d Piscium.

		82. 33
Nov. 10	Q	″ 54·26

43 Piscium.

		76. 26
Sept. 27	Q	″ 18·52
29	Q	16·76

B.A.C. 91.

		70. 36
Oct. 7	Q	″ 23·53
Nov. 5	L	26·08

46 Piscium.

		71. 14
Oct. 5	Q	″ 16·83

B.A.C. 107.

		94. 13
Nov. 10	Q	″ 20·10

12 Ceti.

	Obsr.	° ′ 94. 42
Jan. 6	L	″ 31·54
8	L	33·38
Nov. 14	Q	34·93
28	Q	33·75
29	Q	32·86

B.A.C. 113.

		85. 53
Nov. 3	L	″ 35·33
4	L	32·63

Groombridge 67.

		4. 25
Oct. 14	Q	″ 58·87
Nov. 22	Q	56·45
26	Q	57·76

Groomb. 67, S.P.

		−4. 25
May 7	Q	″ 57·19
13	L	57·62

49 Piscium.

		74. 42
Sept. 27	Q	″ 50·26
Nov. 5	L	54·17

51 Piscium.

		83. 47
Nov. 8	L	″ 48·07

B.A.C. 135.

		120. 18
Oct. 5	Q	″ 28·72
Nov. 17	Q	27·89

B.A.C. 142.

		77. 22
Oct. 7	Q	″ 35·12
31	L	36·83

ε Andromedæ.

	Obsr.	° ′ 61. 25
Nov. 24	Q	″ 36·64
28	Q	37·65
29	Q	38·33

α Cassiopeiæ.

		34. 12
Sept. 29	Q	″ 31·71
Reflexion.		
Sept. 29	Q	33·42

B.A.C. 182.

		31. 59
Nov. 16	Q	″ 33·77

B.A.C. 190.

		110. 56
Oct. 7	Q	″ 22·47
Nov. 3	L	21·43
14	Q	23·77

β Ceti.

		108. 43
Jan. 6	L	″ 59·88
Oct. 5	Q	60·23
Nov. 17	Q	61·83
22	Q	62·23

δ Piscium.

		83. 9
Dec. 8	Q	″ 20·39

ι¹ Piscium.

		63. 1
Nov. 28	Q	″ 50·43
Reflexion.		
Dec. 1	L	48·77

B.A.C. 237.

	Obsr.	° ′ 87. 21
Jan. 6	L	″ 15·01
Oct. 5	Q	11·12

B.A.C. 243.

		86. 39
Nov. 8	L	″ 7·49
14	Q	9·10

Groombridge 144.

		1. 42
Nov. 29	Q	″ 27·40

B.A.C. 252.

		83. 53
Nov. 5	L	″ 3·78
10	Q	4·06

k Piscium.

		63. 31
Nov. 17	Q	″ 44·89
18	Q	42·75

μ Andromedæ.

		52. 14
Oct. 7	Q	″ 20·59
14	Q	18·54
Nov. 16	Q	19·78
26	Q	21·66
Reflexion.		
Nov. 26	Q	22·93

2 Ursæ Minoris.

		4. 28
Dec. 1	L	″ 27·95

B.A.C. 269.

		77. 2
Oct. 24	L	″ 21·39

ϕ^4 Ceti.

	Obsr.	° ′ 102. 6
Oct. 5	Q	″ 53·37

B.A.C. 274.

		84. 15
Nov. 22	Q	″ 6·38

ϵ Piscium.

		82. 50
Oct. 31	L	″ 34·15
Nov. 5	L	35·17
10	Q	34·47
Dec. 8	Q	33·60

B.A.C. 299.

		61. 4
Nov. 28	Q	″ 4·83
Dec. 1	L	3·85

73 Piscium.

		85. 4
Jan. 6	L	″ 25·25
Oct. 7	Q	23·58

72 Piscium.

		75. 47
Jan. 4	L	″ 10·26
8	L	12·43

B.A.C. 308.

		69. 15
Oct. 24	L	″ 20·58

27 Ceti.

		100. 42
Nov. 14	Q	″ 29·22

75 Piscium.

		77. 46
Nov. 4	L	″ 24·21

B.A.C. 325.

	Obsr.	° ′ 80. 49
Nov. 8	L	″ 8·96

β Andromedæ.

		55. 6
Dec. 8	Q	″ 4·31

ψ^3 Piscium.

		71. 4
Oct. 31	L	″ 4·12

τ Piscium.

		60. 37
Jan. 4	L	″ 57·17
8	L	60·46
Nov. 22	Q	59·76

ζ Piscium.

		83. 8
Nov. 10	Q	″ 41·29

87 Piscium.

		74. 35
Nov. 3	L	″ 14·82
8	L	14·61

B.A.C. 371.

		98. 20
Jan. 6	L	″ 35·38

88 Piscium.

		83. 43
Nov. 5	L	″ 30·17

B.A.C. 375.

		106. 32
Nov. 28	Q	″ 18·53

α^1 Ursæ Minoris.

	Obsr.	° ′ −1. 25
Apr. 22	L	″ 10·54

Polaris.

		1. 24
Mar. 11	L	″ 56·81
12	Q	55·73
17	Q	57·52
19	Q	57·35
Apr. 2	Q	58·74
12	Q	57·81
13	L	57·07
18	Q	59·99
19	Q	57·14
20	Q	59·45
21	Q	60·32
22	Q	59·26
Nov. 14	Q	56·19
16	Q	60·50
17	Q	56·33
18	Q	(65·70)
24	Q	57·37
26	Q	58·00
Dec. 1	L	57·28
6	Q	55·32
12	Q	56·02
Reflexion.		
Nov. 14	Q	57·21
16	Q	59·86
18	Q	57·56
26	Q	56·74
Dec. 1	L	56·91
6	Q	56·25

Polaris, S.P.

		−1. 24
Apr. 1	L	″ 56·58
12	Q	58·56
13	L	54·85
14	Q	55·66
18	L	55·88
19	Q	57·32
20	L	57·01

Polaris, S.P. (*concluded.*)

	Obsr.	° ′
		−1. 24
		″
Apr. 21	Q	54·99
22	L	54·23
25	L	54·82
May 13	L	56·61
14	Q	55·74
25	Q	55·98
30	Q	53·37
June 1	Q	55·84
Sept. 27	Q	55·48
29	Q	56·81
Oct. 14	Q	56·31

Reflexion.

Apr. 25	L	54·80
May 13	L	54·18

41 Ceti.

		98. 22
		″
Jan. 6	L	40·01
Oct. 31	L	41·33

***l* Piscium.**

		61. 58
		″
Jan. 8	L	23·88
Nov. 10	Q	25·12

43 Ceti.

		91. 9
		″
Nov. 22	Q	44·30

B.A.C. 408.

		85. 58
		″
Jan. 4	L	25·33
Nov. 3	L	25·20

92 Piscium.

		72. 53
		″
Nov. 5	L	29·80

***θ* Ceti.**

	Obsr.	° ′
		98. 53
		″
Jan. 6	L	10·58
Nov. 12	Q	11·58

***ρ* Piscium.**

		71. 32
		″
Jan. 2	Q	11·58

B.A.C. 430.

		70. 38
		″
Jan. 8	L	12·71
Nov. 3	L	10·02

47 Ceti.

		103. 45
		″
Nov. 8	L	55·27
24	Q	55·09

B.A.C. 440.

		82. 44
		″
Jan. 4	L	39·25

***η* Piscium.**

		75. 21
		″
Jan. 8	L	24·03
Nov. 26	Q	22·03
Dec. 1	L	21·48
8	Q	21·25

Reflexion.

Dec. 1	L	23·62

B.A.C. 464.

		82. 29
		″
Jan. 4	L	23·77
Nov. 3	L	24·80
16	Q	23·50

100 Piscium. (1st star.)

		78. 8
		″
Nov. 22	Q	18·86

B.A.C. 471.

	Obsr.	° ′
		82. 25
		″
Jan. 1	L	20·29
2	Q	22·67

49 Ceti.

		106. 22
		″
Nov. 18	Q	25·84

B.A.C. 479.

		122. 35
		″
Nov. 8	L	19·74

50 Ceti.

		106. 5
		″
Dec. 6	Q	48·83

105 Piscium.

		74. 17
		″
Oct. 31	L	7·27
Nov. 5	L	9·04

B.A.C. 517.

		81. 37
		″
Nov. 26	Q	0·88

***ν* Piscium.**

		85. 12
		″
Jan. 2	Q	7·83
4	L	6·45
Nov. 3	L	8·44
12	Q	8·11
22	Q	10·39

B.A.C. 524.

		74. 54
		″
Jan. 1	L	31·89

109 Piscium.

		70. 35
		″
Nov. 16	Q	49·27

4 Arietis.

	Obsr.	° ′
		73. 43
		″
Oct. 31	L	23·12
Nov. 10	Q	23·74

B.A.C. 549.

		73. 39
		″
Nov. 26	Q	31·47

***ε* Cassiopeiæ.**

		27. 0
		″
Dec. 12	Q	4·73

Reflexion.

Dec. 12	Q	4·38

1 Arietis. (North star.)

		68. 24
		″
Nov. 14	Q	6·27

B.A.C. 576.

		53. 32
		″
Nov. 29	Q	29·73

***β* Arietis.**

		69. 51
		″
Jan. 2	Q	28·44
5	Q	28·27
8	L	30·94
Nov. 12	Q	29·97
24	Q	27·36
28	Q	29·70
Dec. 6	Q	28·02

Reflexion.

Jan. 8	L	27·34
Nov. 24	Q	27·39
Dec. 6	Q	30·47

56 Ceti.

		113. 11
		″
Nov. 10	Q	33·66

λ¹ Arietis.

	Obsʳ.	° ′
		67. 4
		″
Nov. 22	Q	7·32
26	Q	7·98

B.A.C. 609.

		78. 22
		″
Nov. 14	Q	0·55

ε Trianguli.

		57. 22
		″
Jan. 2	Q	21·96

Radcliffe 559.

		1. 28
		″
Jan. 4	L	10·14

Radcliffe 559, S.P.

		−1. 28
		″
May 18	Q	13·81

60 Ceti.

		90. 31
		″
Nov. 29	Q	44·42

61 Ceti.

		90. 59
		″
Nov. 24	Q	38·73
26	Q	40·06

B.A.C. 645.

		64. 49
		″
Nov. 14	Q	12·49

11 Arietis.

		64. 56
		″
Dec. 6	Q	41·23

α Arietis.

	Obsʳ.	° ′
		67. 10
		″
Nov. 10	Q	56·46
12	Q	57·03
16	Q	57·28
28	Q	56·03
Dec. 12	Q	56·74

Reflexion.

Dec. 12	Q	55·93

14 Arietis.

		64. 42
		″
Nov. 22	Q	18·94

15 Arietis.

		71. 9
		″
Dec. 16	Q	33·93

19 Arietis.

		75. 21
		″
Nov. 10	Q	32·83

7 Trianguli.

		57. 16
		″
Dec. 6	Q	28·92

21 Arietis.

		65. 35
		″
Nov. 14	Q	21·40

67 Ceti.

		97. 3
		″
Jan. 1	L	1·95
2	Q	1·18
4	L	2·90
6	L	0·12
8	L	1·63
Nov. 16	Q	1·39
26	Q	2·68

10 Trianguli.

	Obsʳ.	° ′
		61. 59
		″
Nov. 29	Q	12·33

23 Arietis.

		70. 56
		″
Nov. 28	Q	11·63

B.A.C. 722.

		94. 58
		″
Nov. 10	Q	23·49

B.A.C. 738.

		80. 20
		″
Nov. 14	Q	47·81
Dec. 6	Q	46·14

W.B. (2) ii. 412.

		60. 41
		″
Dec. 12	Q	10·59

ξ² Ceti.

		82. 9
		″
Jan. 2	Q	2·95
Nov. 12	Q	5·28
26	Q	3·80
Dec. 16	Q	3·69

B.A.C. 764.

		81. 2
		″
Nov. 22	Q	37·11

Radcliffe 713.

		3. 32
		″
Jan. 1	L	55·64
5	Q	55·46
Nov. 28	Q	57·38

Radcliffe 713, S.P.

		−3. 32
		″
Jan. 1	L	55·39

26 Arietis.

	Obsʳ.	° ′
		70. 44
		″
Jan. 8	L	58·14
Nov. 14	Q	61·77

B.A.C. 774.

		115. 47
		″
Dec. 6	Q	41·44

B.A.C. 790.

		118. 49
		″
Dec. 12	Q	53·53

B.A.C. 803.

		120. 38
		″
Dec. 1	L	22·89

81 Ceti.

		93. 59
		″
Jan. 2	Q	12·22
8	L	13·45

δ Ceti.

		90. 15
		″
Jan. 5	Q	37·40
16	Q	35·72
Nov. 14	Q	36·76
22	Q	37·42
Dec. 6	Q	35·52

Radcliffe 745, S.P.

		−2. 0
		″
June 6	Q	32·27

B.A.C. 834.

		64. 56
		″
Nov. 26	Q	31·33

γ Ceti.

		87. 20
		″
Jan. 6	L	20·79
Dec. 12	Q	21·69

ο Arietis.

	Obsʳ.	° ′ 75. 15 ″
Jan. 1	L	57·61

B.A.C. 855.

		123. 5 ″
Dec. 1	L	55·04

B.A.C. 866.

		65. 22 ″
Dec. 6	Q	58·83

π Arietis.

		73. 6 ″
Jan. 16	Q	11·00
Nov. 22	Q	11·39
28	Q	11·81

σ Arietis.

		75. 28 ″
Jan. 2	Q	48·50
5	Q	48·41
Dec. 12	Q	49·47

B.A.C. 891.
(1st star.)

		84. 5 ″
Jan. 1	L	5·10

B.A.C. 891.
(2nd star.)

		84. 5 ″
Jan. 1	L	5·87

ρ^1 Arietis.

		72. 49 ″
Nov. 29	Q	12·83

ρ^2 Arietis.

		72. 13 ″
Dec. 16	Q	16·90

ε Arietis.

	Obsʳ.	° ′ 69. 12 ″
Jan. 16	Q	19·56

50 Arietis.

		72. 32 ″
Dec. 1	L	14·38

α Ceti.

		86. 26 ″
Jan. 5	Q	45·17
21	Q	46·71
Nov. 30	Q	46·54
Dec. 16	Q	46·17

52 Arietis.

		65. 16 ″
Dec. 12	Q	33·86

Groombridge 595.

		5. 34 ″
Jan. 2	Q	49·75
8	L	50·51

Reflexion.

Jan. 8	L	52·76

Groombridge 595, S.P.

		−5. 34 ″
May 24	Q	47·15
June 3	Q	49·54

55 Arietis.

		61. 26 ″
Nov. 22	Q	41·22

B.A.C. 980.

		63. 37 ″
Nov. 26	Q	34·77

δ Arietis.

	Obsʳ.	° ′ 70. 47 ″
Jan. 4	L	24·74
5	Q	23·43
16	Q	23·31
21	Q	24·49
29	L	22·89
Nov. 29	Q	23·35
Dec. 1	L	25·29

Reflexion.

Jan. 29	L	23·66

ζ Arietis.

		69. 27 ″
Dec. 12	Q	43·11

B.A.C. 1005.

		120. 18 ″
Nov. 30	Q	50·94

B.A.C. 1012.

		116. 36 ″
Jan. 1	L	23·82

59 Arietis.

		63. 25 ″
Jan. 29	L	24·43
Nov. 26	Q	23·56

B.A.C. 1032.

		69. 59 ″
Jan. 4	L	2·34
Dec. 6	Q	2·31

τ^1 Arietis.

		69. 20 ″
Jan. 5	Q	42·22
16	Q	42·98
21	Q	43·50
Nov. 28	Q	43·76

B.A.C. 1054.

	Obsʳ.	° ′ 116. 4 ″
Jan. 1	L	34·85

65 Arietis.

		69. 40 ″
Jan. 6	L	53·70

ο Tauri.

		81. 27 ″
Jan. 8	L	7·72
29	L	5·63
Nov. 30	Q	8·11

B.A.C. 1064.

		71. 43 ″
Nov. 26	Q	18·09
Dec. 12	Q	18·79

B.A.C. 1079.

		73. 42 ″
Jan. 16	Q	29·10
Dec. 6	Q	30·81

***f* Tauri.**

		77. 31 ″
Jan. 1	L	52·39
29	L	52·74

ε Eridani.

		99. 55 ″
Jan. 2	Q	14·42
21	Q	15·34
Nov. 30	Q	15·44

B.A.C. 1102.

		71. 33 ″
Jan. 4	L	8·38
6	L	8·76

B.A.C. 1109.

	Obsr.	° ′ 122. 19
		″
Dec. 1	L	50·41

B.A.C. 1114.

		75. 1
		″
Jan. 29	L	6·57
Dec. 6	Q	7·16

B.A.C. 1130.

		118. 23
		″
Jan. 2	Q	20·99

o Persei.

		56. 28
		″
Nov. 28	Q	29·21
Reflexion.		
Nov. 28	Q	26·52

δ Eridani.

		100. 13
		″
Jan. 16	Q	32·45
21	Q	34·67
Nov. 29	Q	34·87
Dec. 6	Q	33·42

24 Eridani.

		91. 35
		″
June 29	L	40·08
Dec. 1	L	42·68

η Tauri.

		66. 19
		″
Jan. 6	L	6·23
Nov. 30	Q	4·29
Dec. 12	Q	6·41
Reflexion.		
Jan. 6	L	5·56

B.A.C. 1170.

	Obsr.	° ′ 66. 59
		″
Feb. 4	Q	56·58

B.A.C. 1179.

		119. 45
		″
Jan. 2	Q	46·72

B.A.C. 1186.

		66. 42
		″
Jan. 8	L	21·84

B.A.C. 1193.

		91. 52
		″
Jan. 29	L	12·50

B.A.C. 1194.

		120. 34
		″
Dec. 1	L	40·64

B.A.C. 1206.

		73. 4
		″
Jan. 1	L	49·56
30	Q	48·06

B.A.C. 1226.

		84. 21
		″
Feb. 4	Q	17·53
9	Q	16·44

B.A.C. 1239.

		73. 5
		″
Jan. 1	L	23·64

B.A.C. 1237.

		31. 13
		″
Nov. 28	Q	40·17
Reflexion.		
Nov. 28	Q	38·15

Groombridge 750.

	Obsr.	° ′ 4. 48
		″
Jan. 2	Q	34·08
6	L	31·03
16	Q	33·50
21	Q	31·07
29	L	32·05
Reflexion.		
Jan. 2	Q	34·17
6	L	33·02

Groombridge 750, S.P.

		−4. 48
		″
May 26	Q	32·73
June 11	Q	32·97
13	Q	33·39
15	Q	34·52
16	Q	31·19
21	Q	31·91

36 Tauri.

		66. 16
		″
Jan. 30	Q	16·21
Dec. 12	Q	17·71

40 Tauri.

		84. 56
		″
Jan. 1	L	32·56

ψ Tauri.

		61. 22
		″
Feb. 4	Q	9·75

Lalande 7655.

		70. 37
		″
Nov. 29	Q	41·16

B.A.C. 1281.

		73. 42
		″
Jan. 30	Q	39·84

o¹ Eridani.

	Obsr.	° ′ 97. 11
		″
Jan. 2	Q	42·79
Nov. 30	Q	43·46

B.A.C. 1295.

		81. 27
		″
Feb. 9	Q	32·39
Dec. 1	L	32·88

W.B. (1) iv. 180.

		87. 48
		″
Feb. 4	Q	29·45
16	Q	28·84
Nov. 29	Q	31·57

Lalande 8048.

		96. 48
		″
Nov. 28	Q	37·53

56 Tauri.

		68. 33
		″
Jan. 29	L	24·25
Feb. 9	Q	29·16

B.A.C. 1340.

		115. 21
		″
Jan. 1	L	14·92

δ¹ Tauri.

		72. 46
		″
Feb. 15	L	45·61

55 Persei.

		56. 11
		″
Jan. 2	Q	14·79
Reflexion.		
Jan. 2	Q	12·26

ξ Eridani.

	Obs^r.	° ′ ″
		94. 3
Jan. 30	Q	45·40

κ¹ Tauri.

		68. 1
Jan. 29	L	11·84

υ¹ Tauri.

		67. 29
Nov. 28	Q	53·84
29	Q	52·47
30	Q	52·45
Dec. 1	L	53·61
12	Q	53·54

υ² Tauri.

		67. 18
Feb. 9	Q	49·42
16	Q	47·16

ε Tauri.

		71. 7
Jan. 1	L	28·62
16	Q	26·13
Feb. 15	L	27·51
Dec. 12	Q	28·07

44 Eridani.

		88. 55
Jan. 21	Q	25·00
Feb. 4	Q	23·74

B.A.C. 1406.

		73. 57
Jan. 30	Q	58·48
Feb. 16	Q	59·58

46 Eridani.

		97. 1
Jan. 2	Q	36·67

B.A.C. 1418.

	Obs^r.	° ′ ″
		97. 7
Jan. 1	L	25·82

Aldebaran.

		73. 46
Dec. 12	Q	1·90

B.A.C. 1423.

		118. 44
Feb. 4	Q	4·52

B.A.C. 1427.

		93. 53
Jan. 29	L	36·34

B.A.C. 1443.

		102. 23
Feb. 9	Q	42·70
16	Q	38·85

Radcliffe 1272, S.P.

		−3. 54
June 8	Q	32·98
July 2	Q	35·05
4	Q	35·62
5	Q	35·45

τ Tauri.

		67. 18
Dec. 1	L	25·89
8	Q	26·08

B.A.C. 1452.

		57. 23
Jan. 2	Q	37·21
30	Q	37·79

55 Eridani. (1st star.)

		99. 3
Feb. 17	L	6·54

55 Eridani. (2nd star.)

	Obs^r.	° ′ ″
		99. 3
Feb. 17	L	12·66

μ Eridani.

		93. 30
Jan. 29	L	24·77
Mar. 1	Q	26·09

B.A.C. 1475.

		57. 39
Feb. 16	Q	13·52

B.A.C. 1482.

		118. 20
Jan. 1	L	8·68

59 Eridani.

		106. 34
Jan. 2	Q	24·01

B.A.C. 1488.

		120. 15
Feb. 4	Q	58·37

2 Aurigæ.

		53. 31
Feb. 23	Q	48·20

B.A.C. 1497.

		62. 19
Jan. 30	Q	59·44
Feb. 9	Q	59·63

B.A.C. 1505.

		73. 12
Feb. 17	L	0·84

5 Orionis.

		87. 43
Jan. 6	L	5·50

B.A.C. 1509.

	Obs^r.	° ′ ″
		16. 26
Jan. 29	L	41·34

Reflexion.

Jan. 29	L	42·95

B.A.C. 1517.

		73. 35
Feb. 16	Q	52·66

ι Aurigæ.

		57. 3
Dec. 12	Q	9·42

B.A.C. 1526.

		73. 3
Feb. 18	Q	44·51

99 Tauri.

		66. 16
Nov. 28	Q	1·92
30	Q	0·27

B.A.C. 1537.

		75. 40
Feb. 17	L	3·60

ι Tauri.

		68. 36
Jan. 30	Q	26·19
Feb. 9	Q	23·55
16	Q	26·04
23	Q	28·24

B.A.C. 1555.

		68. 54
Mar. 1	Q	58·40

B.A.C. 1564.

		121. 58
Feb. 13	Q	15·90
18	Q	14·99

B.A.C. 1563.	Obsʳ.	° ′
		70. 23
Dec. 12	Q	″ 1·78

m Tauri.		
		71. 32
Feb. 16	Q	″ 24·24

ε Leporis.		
		112. 33
Dec. 8	Q	″ 20·27

B.A.C. 1578.		
		116. 20
Feb. 17	L	″ 15·91

66 Eridani.		
		94. 50
Jan. 6	L	″ 23·59

B.A.C. 1594.		
		76. 37
Mar. 1	Q	″ 33·16

B.A.C. 1601.		
		74. 7
Jan. 2	Q	″ 32·17
29	L	32·15
Feb. 10	L	32·23

Capella.		
		44. 8
Feb. 23	Q	″ 37·77

108 Tauri.		
		67. 52
Jan. 30	Q	″ 26·03

18 Orionis.		
		78. 48
Feb. 17	L	″ 55·57

18 Aurigæ.	Obsʳ.	° ′
		56. 9
Feb. 16	Q	″ 41·68

B.A.C. 1643.		
		103. 40
Jan. 6	L	″ 1·59
Feb. 13	Q	3·79

B.A.C. 1647.		
		70. 33
Feb. 9	Q	″ 51·51

B.A.C. 1651.		
		70. 19
Jan. 30	Q	″ 34·88
Feb. 17	L	37·42

ν Leporis.		
		102. 27
Jan. 29	L	″ 26·85

B.A.C. 1655.		
		117. 30
Jan. 1	L	″ 40·88

B.A.C. 1656.		
		81. 42
Mar. 1	Q	″ 34·24

σ Aurigæ.		
		52. 44
Feb. 23	Q	″ 41·42

110 Tauri.		
		73. 25
Jan. 2	Q	″ 57·90

8 Leporis.		
		104. 3
Jan. 6	L	″ 28·43

ψ^1 Orionis.	Obsʳ.	° ′
		88. 16
Feb. 17	L	″ 52·56

113 Tauri.		
		73. 25
Dec. 12	Q	″ 27·10

Groombridge 944.		
		4. 53
Feb. 4	Q	″ 5·72

115 Tauri.		
		72. 9
Jan. 29	L	″ 27·78

B.A.C. 1699.		
		74. 4
Jan. 1	L	″ 44·83
Mar. 4	L	44·31

B.A.C. 1711.		
		69. 33
Feb. 16	Q	″ 30·20

B.A.C. 1714.		
		67. 38
Feb. 9	Q	″ 46·44

n^1 Orionis. (1st star.)		
		86. 48
Jan. 29	L	″ 50·84

B.A.C. 1728. (1st star.)		
		73. 2
Feb. 17	L	″ 45·30

B.A.C. 1728. (2nd star.)		
		73. 2
Feb. 17	L	″ 54·26

δ Orionis.	Obsʳ.	° ′
		90. 24
Jan. 6	L	″ 9·90

10 Leporis.		
		110. 58
Jan. 2	Q	″ 0·49

α Leporis.		
		107. 55
Jan. 1	L	″ 20·64
Feb. 18	Q	19·13
23	Q	17·27
Mar. 1	Q	20·60

n^2 Orionis.		
		86. 19
Feb. 4	Q	″ 44·30
Mar. 4	L	45·63

ζ Tauri.		
		68. 56
Apr. 11	L	″ 35·09
Dec. 12	Q	38·09

B.A.C. 1783.		
		117. 57
Feb. 17	L	″ 10·92

B.A.C. 1787.		
		118. 46
Feb. 13	Q	″ 22·66

B.A.C. 1789.		
		93. 38
Jan. 6	L	″ 39·47
Feb. 9	Q	36·49

126 Tauri.		
		73. 32
Mar. 12	Q	″ 23·67

B.A.C. 1793.

	Obsr.	° ′ ″
		67. 24
Mar. 4	L	37·95

α Columbæ.

	Obsr.	° ′ ″
		124. 8
Mar. 10	Q	58·49

Rümker 1530.

	Obsr.	° ′ ″
		67. 23
Feb. 4	Q	36·39

127 Tauri.

	Obsr.	° ′ ″
		71. 5
Jan. 30	Q	17·04

B.A.C. 1811.

	Obsr.	° ′ ″
		71. 21
Dec. 12	Q	27·90

B.A.C. 1826.

	Obsr.	° ′ ″
		80. 31
Feb. 18	Q	48·23
23	Q	49·81
Mar. 4	L	51·57

131 Tauri.

	Obsr.	° ′ ″
		75. 33
Feb. 17	L	51·44

B.A.C. 1831.

	Obsr.	° ′ ″
		88. 52
Mar. 1	Q	58·26

υ Aurigæ.

	Obsr.	° ′ ″
		52. 44
Jan. 30	Q	13·41

55 Orionis.

	Obsr.	° ′ ″
		97. 33
Jan. 29	L	26·71
Feb. 9	Q	26·77

56 Orionis.

	Obsr.	° ′ ″
		88. 10
Jan. 2	Q	54·25
Feb. 4	Q	52·95

χ¹ Orionis.

	Obsr.	° ′ ″
		69. 45
Dec. 12	Q	10·09

χ² Orionis.

	Obsr.	° ′ ″
		70. 16
Jan. 1	L	50·50

α Orionis.

	Obsr.	° ′ ″
		82. 37
Feb. 17	L	16·96
Reflexion.		
Feb. 17	L	15·31

B.A.C. 1882.

	Obsr.	° ′ ″
		61. 4
Mar. 4	L	59·88

B.A.C. 1893.

	Obsr.	° ′ ″
		80. 30
Jan. 30	Q	52·35
Feb. 18	Q	54·96

60 Orionis.

	Obsr.	° ′ ″
		89. 27
Jan. 29	L	45·25
Feb. 23	Q	44·90

Groombridge 1004.

	Obsr.	° ′ ″
		3. 14
Mar. 1	Q	19·09

2 Monocerotis.

	Obsr.	° ′ ″
		99. 34
Jan. 2	Q	12·35
Feb. 13	Q	13·61

χ² Orionis.

	Obsr.	° ′ ″
		70. 18
Feb. 16	Q	37·43
17	L	39·11

1 Geminorum.

	Obsr.	° ′ ″
		66. 44
Jan. 1	L	0·03

63 Orionis.

	Obsr.	° ′ ″
		84. 34
Jan. 29	L	31·45
30	Q	32·22

B.A.C. 1956.

	Obsr.	° ′ ″
		100. 14
Feb. 9	Q	10·59

ν Orionis.

	Obsr.	° ′ ″
		75. 13
Feb. 16	Q	4·11
17	L	7·06
Mar. 4	L	6·82

B.A.C. 1961.

	Obsr.	° ′ ″
		101. 9
Jan. 2	Q	42·72

B.A.C. 1967.

	Obsr.	° ′ ″
		119. 44
Mar. 1	Q	48·01

19 Leporis.

	Obsr.	° ′ ″
		109. 10
Feb. 13	Q	8·21

4 Geminorum.

	Obsr.	° ′ ″
		66. 58
Feb. 18	Q	49·91
23	Q	49·23

6 Geminorum.

	Obsr.	° ′ ″
		67. 3
Mar. 12	Q	51·54

B.A.C. 1997.

	Obsr.	° ′ ″
		116. 27
Feb. 9	Q	15·82

η Geminorum.

	Obsr.	° ′ ″
		67. 27
Mar. 10	Q	25·20

2 Lyncis.

	Obsr.	° ′ ″
		30. 56
Feb. 4	Q	43·79
Reflexion.		
Feb. 4	Q	43·28

k¹ Orionis.

	Obsr.	° ′ ″
		77. 24
Jan. 30	Q	32·80

B.A.C. 2021.

	Obsr.	° ′ ″
		54. 44
Jan. 2	Q	34·16
Mar. 19	Q	35·85

6 Monocerotis.

	Obsr.	° ′ ″
		100. 40
Mar. 4	L	33·88

μ Geminorum.

	Obsr.	° ′ ″
		67. 25
Apr. 12	Q	13·11

B.A.C. 2057.

	Obsr.	° ′ ″
		86. 10
Mar. 4	L	14·35

8 Monocerotis.

	Obsr.	° ′
		85. 20
Jan. 29	L	27·53

B.A.C. 2060.

		85. 20
Jan. 29	L	14·52

β Canis Majoris.

		107. 53
Jan. 2	Q	27·28

77 Orionis.

		89. 37
Mar. 12	Q	19·80
18	L	19·95

ν Geminorum.

		69. 42
Feb. 4	Q	16·51
Reflexion.		
Feb. 4	Q	14·16

10 Monocerotis.

		94. 40
Mar. 4	L	52·59

11 Monocerotis.

		96. 56
Mar. 17	Q	56·22

19 Geminorum.

		74. 0
Jan. 29	L	16·57

20 Geminorum.

		72. 7
Mar. 19	Q	40·94

B.A.C. 2116.

	Obsr.	° ′
		72. 7
Mar. 19	Q	24·07

12 Monocerotis.

		85. 2
Jan. 2	Q	57·44
30	Q	58·40
Feb. 9	Q	56·47

B.A.C. 2130.

		58. 27
Feb. 13	M	48·68

22 Geminorum.

		70. 28
Mar. 4	L	8·24

14 Monocerotis.

		82. 19
Feb. 8	L	31·50
23	Q	27·28
Mar. 18	L	29·56

B.A.C. 2173.

		70. 13
Mar. 12	Q	13·77

15 Monocerotis.

		79. 58
Feb. 4	Q	53·91
Mar. 17	Q	54·21
19	Q	54·48

B.A.C. 2189.

		89. 22
Jan. 2	Q	49·60
29	L	50·90

Cephei 51 (Hev.)

	Obsr.	° ′
		2. 45
Jan. 30	Q	17·68
Feb. 8	L	19·64
9	Q	18·71
13	M	18·99
16	Q	17·49
17	L	18·19
18	Q	17·64
23	Q	17·79
Mar. 4	L	18·44
10	Q	16·33
18	L	19·23

Cephei 51 (Hev.), S.P.

		−2. 45
July 6	Q	16·10
12	Q	17·81
13	Q	18·52
14	Q	16·25
16	Q	17·92
19	Q	17·24
20	Q	19·20
21	Q	18·09
23	Q	17·45
29	Q	17·12
30	Q	18·81
Aug. 1	Q	17·99
6	Q	16·94
8	Q	16·46
9	Q	17·02
10	Q	18·41
12	Q	20·88
13	Q	19·68
16	Q	18·68
18	Q	17·25
29	L	16·62
31	L	17·44
Sept. 26	L	17·82
28	L	17·97

Sirius.

		106. 31
Mar. 1	Q	56·05

11 Canis Majoris.

	Obsr.	° ′
		104. 16
Jan. 29	L	56·58

12 Canis Majoris.

		110. 52
Mar. 12	Q	13·96
17	Q	14·71
19	Q	15·25

35 Geminorum.

		76. 26
Mar. 4	L	1·65

θ Canis Majoris.

		101. 52
Jan. 29	L	16·77
Feb. 8	L	14·18
9	Q	13·90
17	L	17·36

B.A.C. 2265.

		72. 5
Feb. 16	Q	22·14
Mar. 4	L	24·21

40 Geminorum.

		63. 54
Mar. 17	Q	16·32

W.B. (2) vi. 1534.

		73. 46
Feb. 13	M	44·35

B.A.C. 2280.

		73. 52
Mar. 12	Q	31·91

ε Canis Majoris.

		118. 47
Feb. 9	Q	20·85

ζ Geminorum.

	Obsr.	° ′
		69. 14
		″
Feb. 17	L	0·39
Apr. 12	Q	0·24
13	L	0·62

B.A.C. 2306.

		78. 51
		″
Feb. 16	Q	5·66

19 Monocerotis.

		94. 2
		″
Jan. 30	Q	42·20

44 Geminorum.

		67. 9
		″
Feb. 3	L	42·82
Mar. 17	Q	43·17

γ Canis Majoris.

		105. 26
		″
Feb. 8	L	4·53

Piazzi vi. 329.

		74. 15
		″
Mar. 18	L	16·74

B.A.C. 2329.

		74. 15
		″
Feb. 9	Q	39·88

B.A.C. 2326.

		7. 20
		″
Feb. 23	Q	20·80
Mar. 1	Q	16·74

Reflexion.

Feb. 23	Q	16·67
Mar. 1	Q	19·18

48 Geminorum.

	Obsr.	° ′
		65. 38
		″
Feb. 13	M	49·29
Mar. 12	Q	49·61

B.A.C. 2356.

		84. 7
		″
Mar. 24	Q	23·63

51 Geminorum.

		73. 36
		″
Feb. 3	L	48·15
5	L	49·94

24 Monocerotis.

		89. 55
		″
Mar. 4	L	41·86

B.A.C. 2385.

		120. 51
		″
Mar. 18	L	9·06

B.A.C. 2387.

		73. 37
		″
Feb. 5	L	3·46

B.A.C. 2393.

		116. 48
		″
Feb. 9	Q	9·45

λ Geminorum.

		73. 12
		″
Feb. 17	L	57·75
Mar. 17	Q	60·85
Apr. 12	Q	61·21
13	L	61·40

Radcliffe 1928.

		11. 2
		″
Jan. 30	Q	32·12
Feb. 16	Q	34·44

Radcliffe 1928.
Reflexion.

	Obsr.	° ′
		11. 2
		″
Jan. 30	Q	28·96
Feb. 16	Q	36·17

29 Canis Majoris.

		114. 18
		″
Feb. 13	M	44·49

56 Geminorum.

		69. 18
		″
Feb. 3	L	10·11
Mar. 24	Q	10·48

B.A.C. 2433.

		89. 34
		″
Jan. 29	L	4·70
Mar. 18	L	6·68

B.A.C. 2432.

		71. 28
		″
Feb. 5	L	10·16

B.A.C. 2437.

		95. 43
		″
Mar. 12	Q	34·08

1 Canis Minoris.

		78. 4
		″
Feb. 23	Q	0·14

Reflexion.

Feb. 23	Q	0·53

s Puppis.

		121. 40
		″
Feb. 17	L	11·38

β Canis Minoris.

	Obsr.	° ′
		81. 26
		″
Mar. 1	Q	20·78

Reflexion.

Mar. 1	Q	21·37

η Canis Minoris.

		82. 46
		″
Feb. 3	L	57·11

δ¹ Canis Minoris.

		87. 48
		″
Feb. 17	L	1·74
Mar. 12	Q	1·14

67 Geminorum.

		74. 4
		″
Mar. 24	Q	20·69

68 Geminorum.

		73. 53
		″
Feb. 3	L	4·27
Mar. 17	Q	2·41

Castor.

		57. 48
		″
Jan. 30	Q	57·57

Reflexion.

Jan. 30	Q	62·72

δ² Canis Minoris.

		86. 25
		″
Feb. 16	Q	19·86

δ³ Canis Minoris.

		86. 20
		″
Feb. 23	Q	9·23

25 Monocerotis.

		93. 48
		″
Feb. 17	L	37·27

m Puppis.

	Obsr.	° ′
		115. 3
		″
Mar. 1	Q	28·01
23	L	30·13

B.A.C. 2538.

		104. 57
		″
Mar. 24	Q	5·65

B.A.C. 2537.

		76. 12
		″
Feb. 3	L	15·13
23	Q	13·96

Pollux.

		61. 38
		″
Feb. 9	Q	52·66
16	Q	52·87
Mar. 4	L	54·02
30	L	53·68
Reflexion.		
Feb. 9	Q	54·07
16	Q	52·50
Mar. 4	L	56·88
30	L	56·43

79 Geminorum.

		69. 21
		″
Jan. 30	Q	37·00
Feb. 5	L	39·73

B.A.C. 2557.

		116. 1
		″
Mar. 17	Q	50·09

1 Puppis.

		118. 5
		″
Mar. 19	Q	23·07

***g* Geminorum.**

		71. 9
		″
Apr. 13	L	40·50
14	Q	39·77

B.A.C. 2565.

	Obsr.	° ′
		114. 20
		″
Mar. 23	L	56·80

Radcliffe 2020, S.P.

		−3. 55
		″
Aug. 26	Q	16·20

B.A.C. 2587.

		112. 11
		″
Mar. 1	Q	14·27
12	Q	11·70

5 Puppis.

		101. 51
		″
Feb. 8	L	36·62
23	Q	39·53

B.A.C. 2600.

		121. 16
		″
Jan. 29	L	48·20

ξ Argûs.

		114. 31
		″
Mar. 23	L	14·23

Groombridge 1359.

		5. 33
		″
Mar. 4	L	40·89
Reflexion.		
Mar. 4	L	44·50

B.A.C. 2605.

		70. 19
		″
Feb. 5	L	49·14

8 Puppis.

		102. 28
		″
Mar. 19	Q	25·42

10 Puppis.

	Obsr.	° ′
		104. 29
		″
Feb. 3	L	56·30

85 Geminorum.

		69. 45
		″
Jan. 30	Q	35·05
Feb. 23	Q	33·02

14 Canis Minoris.

		87. 24
		″
Jan. 29	L	54·89

B.A.C. 2654.

		76. 23
		″
Mar. 1	Q	26·30
18	L	26·72
23	L	24·85

ω¹ Cancri.

		64. 14
		″
Feb. 13	M	14·85

27 Monocerotis.

		93. 18
		″
Jan. 30	Q	41·02
Feb. 8	L	42·04

12 Puppis.

		112. 56
		″
Feb. 23	Q	32·74
Mar. 30	L	37·09

6 Cancri.

		61. 49
		″
Apr. 13	L	38·40

B.A.C. 2679.

		79. 40
		″
Feb. 16	Q	45·13

B.A.C. 2683.

	Obsr.	° ′
		70. 46
		″
Jan. 29	L	34·25

B.A.C. 2677.

		7. 9
		″
Feb. 9	Q	28·72
Reflexion.		
Feb. 9	Q	29·06

B.A.C. 2706.

		107. 16
		″
Mar. 17	Q	57·54
23	L	57·16

11 Cancri.

		62. 7
		″
Mar. 1	Q	35·94
30	L	37·72

ψ¹ Cancri.

		63. 45
		″
Feb. 23	Q	28·41

B.A.C. 2731.

		72. 35
		″
Jan. 30	Q	11·93
Feb. 8	L	14·31

B.A.C. 2739.

		105. 51
		″
Jan. 29	L	6·60

B.A.C. 2737.

		74. 58
		″
Feb. 13	M	15·15

ζ¹ Cancri.

		71. 56
		″
Mar. 17	Q	41·32
18	L	42·21
Apr. 13	L	41·23
14	Q	41·19

B.A.C. 2748.

	Obsr.	° ′ 75. 35 ″
Feb. 16	Q	32·90
Mar. 23	L	34·09

β Cancri.

		80. 23 ″
Jan. 29	L	50·45
Feb. 8	L	51·28
Mar. 23	L	(43·56)

B.A.C. 2782.

		80. 42 ″
Jan. 30	Q	56·59
Feb. 3	L	57·03

B.A.C. 2791.

		85. 37 ″
Feb. 13	M	36·01
Mar. 17	Q	37·35

Groombridge 1418.

		4. 28 ″
Mar. 23	L	32·06
29	Q	28·19
30	L	31·84

Groombridge 1418, S.P.

		−4. 28 ″
Sept. 19	Q	31·43

d^1 Cancri.

		71. 13 ″
Feb. 3	L	62·65
9	Q	59·23

Piazzi viii. 48.

		78. 54 ″
Jan. 29	L	28·60

W.B. (1) viii. 425.

	Obsr.	° ′ 81. 55 ″
Jan. 30	Q	29·14

B.A.C. 2822.

		81. 59 ″
Mar. 18	L	39·73
24	Q	41·86
Apr. 13	L	41·46

B.A.C. 2839.

		118. 46 ″
Mar. 23	L	13·63

B.A.C. 2841.

		63. 21 ″
Feb. 16	Q	20·03

B.A.C. 2843.

		121. 13 ″
Jan. 29	L	36·62

W.B. (2) viii. 523.

		70. 34 ″
Feb. 3	Q	41·12
Mar. 30	L	40·77

η Cancri.

		69. 5 ″
Mar. 17	Q	56·89
18	L	57·61

B.A.C. 2868.

		109. 7 ″
Jan. 30	Q	15·08

B.A.C. 2872.

		76. 16 ″
Feb. 13	M	45·74
23	Q	46·14

Radcliffe 2162.

	Obsr.	° ′ 5. 36 ″
Mar. 24	Q	59·77

Radcliffe 2162, S.P.

		−5. 36 ″
Sept. 12	Q	59·12
13	Q	60·23

35 Cancri.

		69. 56 ″
Mar. 1	Q	38·86
Apr. 13	L	37·78

B.A.C. 2888.

		74. 13 ″
Feb. 3	L	6·24
Mar. 12	Q	5·67
23	L	7·49

c^1 Cancri.

		79. 52 ″
Apr. 2	Q	29·30

c^2 Cancri.

		79. 57 ″
Mar. 30	L	8·77

B.A.C. 2907.

		69. 55 ″
Mar. 4	L	58·25

g Mali.

		115. 46 ″
Feb. 9	Q	49·78
23	Q	47·37

40 Cancri.

		69. 33 ″
Apr. 14	Q	4·45

B.A.C. 2925.

	Obsr.	° ′ 69. 56 ″
Mar. 4	L	25·62

6 Hydræ.

		101. 59 ″
Feb. 8	L	49·69

***f* Mali.**

		119. 4 ″
Feb. 3	L	44·90
Mar. 1	Q	44·90

Radcliffe 2189, S.P.

		−5. 55 ″
Aug. 24	Q	6·51
Sept. 5	Q	5·96

δ Cancri.

		71. 20 ″
Apr. 14	Q	53·24

10 Hydræ.

		83. 49 ″
Mar. 30	L	44·00

ε Hydræ.

		83. 5 ″
Apr. 13	L	3·68
Reflexion.		
Apr. 13	L	4·77

12 Hydræ.

		103. 3 ″
Mar. 12	Q	9·29
23	L	9·55

B.A.C. 2977.

		76. 57 ″
Feb. 9	Q	11·45
17	L	14·06

14 Hydræ.

	Obsʳ.	° ′ 92. 56
Apr. 2	Q	″ 24·64

B.A.C. 2990.

		71. 29
Feb. 23	Q	″ 36·30
Mar. 4	L	35·52

54 Cancri.

		74. 8
Feb. 8	L	″ 50·61
Mar. 29	Q	48·51

B.A.C. 3005.

		118. 57
Mar. 30	L	″ 33·88

Radcliffe 2218.

		5. 16
Mar. 17	Q	″ 54·32

Reflexion.

Mar. 17	Q	53·94

Radcliffe 2218, S.P.

		−5. 16
Aug. 20	Q	″ 50·77

B.A.C. 3029.

		72. 15
Mar. 12	Q	″ 11·64
16	L	13·22
24	Q	10·06

17 Hydræ.

		97. 27
Feb. 9	Q	″ 12·41
17	L	16·42
23	Q	11·01

B.A.C. 3039.

	Obsʳ.	° ′ 97. 27
Feb. 17	L	″ 10·51
23	Q	6·34

α Cancri.

		77. 37
Mar. 18	L	″ 6·83
19	Q	3·67

68 Cancri.

		72. 23
Feb. 8	L	″ 16·16
Mar. 16	L	15·17

71 Cancri.

		72. 4
Feb. 23	Q	″ 6·40

B.A.C. 3103.

		72. 20
Feb. 9	Q	″ 39·36
Mar. 12	Q	40·14
23	L	37·99

ω Hydræ.

		84. 21
Mar. 24	Q	″ 58·63
Apr. 13	L	59·39

κ Cancri.

		78. 47
Feb. 8	L	″ 9·94
Mar. 4	L	11·94
18	L	11·04
19	Q	12·34

B.A.C. 3112.

		55. 33
Mar. 17	Q	″ 59·43

Reflexion.

Mar. 17	Q	64·67

19 Hydræ.

	Obsʳ.	° ′ 98. 2
Apr. 2	Q	″ 31·14

20 Hydræ.

		98. 14
Mar. 16	L	″ 15·46

e Mali.

		119. 48
Feb. 9	Q	″ 42·58
23	Q	41·68

B.A.C. 3133.

		85. 34
Mar. 30	L	″ 40·29
Apr. 13	L	39·62

B.A.C. 3164.

		77. 55
Mar. 12	Q	″ 51·38
Apr. 14	Q	52·54

25 Hydræ.

		101. 23
Feb. 23	Q	″ 32·25
Mar. 16	L	32·66

83 Cancri.

		71. 43
Mar. 29	Q	″ 12·26
30	L	15·91

B.A.C. 3176.

		79. 38
Mar. 17	Q	″ 17·85

B.A.C. 3185.

		99. 2
Mar. 19	Q	″ 8·30

B.A.C. 3202.

	Obsʳ.	° ′ 81. 42
Mar. 12	Q	″ 17·43

B.A.C. 3203.

		84. 11
Feb. 23	Q	″ 56·38

A Hydræ.

		94. 31
Mar. 17	Q	″ 57·15

B.A.C. 3224.

		118. 11
Feb. 23	Q	″ 55·76

B.A.C. 3243.

		115. 59
Apr. 14	Q	″ 55·54

τ² Hydræ.

		90. 35
Mar. 17	Q	″ 12·61

B.A.C. 3273.

		58. 13
Mar. 29	Q	″ 49·65
Apr. 2	Q	50·28

10 Leonis.

		82. 33
Apr. 14	Q	″ 22·89

11 Leonis.

		75. 2
Feb. 23	Q	″ 22·53

B.A.C. 3292.

		69. 5
Mar. 1	Q	″ 26·35

B.A.C. 3296.

	Obsr.	° ′	″
Mar. 17	Q	121. 34	4·15

o Leonis.

	Obsr.	° ′	″
Apr. 1	L	79. 29	26·06

B.A.C. 3318.

	Obsr.	° ′	″
Feb. 23	Q	69. 11	11·25

ε Leonis.

	Obsr.	° ′	″
Mar. 23	L	65. 36	4·07
29	Q		5·36
Reflexion.			
Mar. 23	L		2·94

θ Antliæ.

	Obsr.	° ′	″
Mar. 11	L	117. 8	51·79
19	Q		53·04

B.A.C. 3340.

	Obsr.	° ′	″
Mar. 17	Q	119. 34	39·36
Apr. 1	L		42·08

B.A.C. 3343.

	Obsr.	° ′	″
Mar. 1	Q	68. 46	1·92

υ Ursæ Majoris.

	Obsr.	° ′	″
Mar. 24	Q	30. 19	24·82
Apr. 12	Q		(30·24)
13	L		25·29
Reflexion.			
Mar. 24	Q		27·16
Apr. 12	Q		(20·34)
13	L		23·45

20 Leonis.

	Obsr.	° ′	″
Feb. 23	Q	68. 11	15·78
Mar. 4	L		17·08

B.A.C. 3356.

	Obsr.	° ′	″
Apr. 14	Q	78. 15	33·09
18	L		34·69

21 Leonis.

	Obsr.	° ′	″
Mar. 11	L	77. 31	26·65
Apr. 2	Q		27·66

μ Leonis.

	Obsr.	° ′	″
Mar. 18	L	63. 21	15·88
Reflexion.			
Mar. 18	L		12·57

8 Sextantis.

	Obsr.	° ′	″
Mar. 17	Q	97. 27	58·59
19	Q		58·48

Radcliffe 2404.

	Obsr.	° ′	″
Mar. 12	Q	5. 25	46·42
Reflexion.			
Mar. 12	Q		(41·77)

Radcliffe 2404, S.P.

	Obsr.	° ′	″
Sept. 21	Q	−5. 25	48·48
Oct. 3	Q		47·11
28	L		46·12

B.A.C. 3386.

	Obsr.	° ′	″
Mar. 1	Q	84. 24	54·29

B.A.C. 3391.

	Obsr.	° ′	″
Feb. 23	Q	115. 17	37·21

26 Leonis.

	Obsr.	° ′	″
Mar. 4	L	74. 7	54·30
Apr. 18	L		55·83

Radcliffe 2407.

	Obsr.	° ′	″
Apr. 13	L	2. 3	10·62

B.A.C. 3409.

	Obsr.	° ′	″
Apr. 14	Q	59. 42	16·52

π Leonis.

	Obsr.	° ′	″
Mar. 19	Q	81. 18	15·21
20	L		18·12
23	L		16·84
24	Q		17·46
29	Q		16·37
30	L		16·64
Apr. 2	Q		17·38
Reflexion.			
Mar. 24	Q		18·56

B.A.C. 3423.

	Obsr.	° ′	″
Mar. 1	Q	67. 23	45·13
Apr. 19	Q		48·27

B.A.C. 3428.

	Obsr.	° ′	″
Feb. 23	Q	102. 38	32·81

B.A.C. 3434.

	Obsr.	° ′	″
Mar. 11	L	77. 42	53·91
17	Q		51·78

B.A.C. 3438.

	Obsr.	° ′	″
Mar. 4	L	84. 20	19·30

A Leonis.

	Obsr.	° ′	″
Mar. 19	Q	79. 20	12·75
20	L		13·77
Apr. 12	Q		10·50
Reflexion.			
Apr. 12	Q		16·06

Regulus.

	Obsr.	° ′	″
Apr. 22	L	77. 22	8·78
Reflexion.			
Apr. 22	L		11·98

16 Sextantis.

	Obsr.	° ′	″
Mar. 11	L	83. 9	49·64
Apr. 18	L		51·71

33 Leonis.

	Obsr.	° ′	″
Mar. 17	Q	73. 37	33·78
29	Q		34·79

B.A.C. 3471.

	Obsr.	° ′	″
Feb. 23	Q	102. 8	38·62
Apr. 13	L		43·19

18 Sextantis.

	Obsr.	° ′	″
Apr. 2	Q	97. 44	56·95

W.B. (2) x. 90–1.

	Obsr.	° ′	″
Apr. 19	Q	57. 57	3·08
21	Q		1·87

22 Leonis Minoris.

	Obsr.	° ′
		57. 51
		″
Mar. 12	Q	27·91

Reflexion.

Mar. 12	Q	29·31

21 Sextantis.

		97. 19
		″
Apr. 1	L	10·30
20	L	9·84

B.A.C. 3506.

		71. 35
		″
Feb. 23	Q	2·95

Groombridge 1620.

		5. 3
		″
Mar. 18	L	38·09
23	L	37·59
30	L	37·44
Apr. 14	Q	37·99

Reflexion.

Mar. 18	L	36·60
23	L	35·95
30	L	34·16

Groombridge 1620, S.P.

		−5. 3
		″
Oct. 7	Q	38·22
31	L	35·56
Nov. 3	L	36·98
5	L	36·02

22 Sextantis.

		97. 23
		″
Mar. 11	L	27·90
24	Q	26·62

B.A.C. 3521.

	Obsr.	° ′
		118. 18
		″
Mar. 17	Q	48·58
29	Q	46·83
Apr. 22	L	49·83

B.A.C. 3538.

		80. 21
		″
Apr. 12	Q	3·09
18	L	5·43

B.A.C. 3540.

		90. 3
		″
Mar. 19	Q	58·72

26 Leonis Minoris.

		54. 5
		″
Apr. 19	Q	49·23

27 Leonis Minoris.

		55. 24
		″
Apr. 21	Q	26·77

B.A.C. 3553.

		92. 57
		″
Apr. 2	Q	23·26
22	L	27·00

B.A.C. 3562.

		80. 32
		″
Mar. 1	Q	1·12

μ Hydræ.

		106. 8
		″
Apr. 19	Q	35·65

27 Sextantis.

		93. 41
		″
Mar. 17	Q	50·06
Apr. 20	L	52·57

B.A.C. 3582.

	Obsr.	° ′
		93. 2
		″
Mar. 24	Q	53·72
Apr. 22	L	53·14

B.A.C. 3583.

		79. 8
		″
Apr. 23	Q	57·38

B.A.C. 3592.

		87. 48
		″
Mar. 29	Q	44·43

δ Antliæ.

		119. 54
		″
Apr. 21	Q	43·49

Radcliffe 2507.

		4. 33
		″
Apr. 12	Q	1·09

Radcliffe 2507, S.P.

		−4. 32
		″
Oct. 5	Q	58·05

ϕ^1 Hydræ.

		106. 15
		″
Mar. 17	Q	25·13

44 Hydræ.

		113. 2
		″
Mar. 1	Q	43·58
Apr. 29	L	43·98

49 Leonis.

		80. 38
		″
Apr. 19	Q	55·40

B.A.C. 3637.

		102. 40
		″
Apr. 21	Q	43·65
22	L	44·18

50 Leonis.

	Obsr.	° ′
		73. 9
		″
Apr. 23	Q	55·94

B.A.C. 3649.

		80. 26
		″
Mar. 24	Q	58·47

B.A.C. 3661.

		57. 35
		″
Mar. 17	Q	30·54

34 Sextantis.

		85. 42
		″
Mar. 16	L	25·50
18	L	27·07
Apr. 18	L	27·15
19	Q	28·91
28	Q	25·88
30	Q	27·13

Radcliffe 2543.

		21. 52
		″
Mar. 19	Q	37·37

Reflexion.

Mar. 19	Q	36·09

Piazzi x. 140.

		84. 37
		″
Apr. 29	L	16·84

36 Sextantis.

		86. 47
		″
Mar. 20	L	52·17
Apr. 21	Q	54·10

B.A.C. 3698.

		115. 20
		″
Apr. 13	L	4·40

43 Leonis Minoris.

	Obsr.	° ′
		59. 51
		″
Apr. 2	Q	54·39

*** R.A. $10^h\ 41^m\ 59^s$.**

		98. 1
		″
Mar. 17	Q	27·89

39 Sextantis.

		98. 22
		″
Apr. 29	L	54·38

40 Sextantis.
(1st star.)

		93. 18
		″
Mar. 16	L	20·73
Apr. 18	L	21·70

40 Sextantis.
(2nd star.)

		93. 18
		″
Mar. 16	L	22·04
Apr. 18	L	23·05

41 Sextantis.

		98. 10
		″
Mar. 29	Q	40·36
30	L	43·11

Groombridge 1697.

		19. 25
		″
Apr. 14	Q	20·77
	Reflexion.	
Apr. 14	Q	22·12

b^2 Hydræ.

		107. 36
		″
Mar. 11	L	44·62

B.A.C. 3726.

	Obsr.	° ′
		88. 15
		″
Mar. 23	L	15·10

48 Leonis Minoris.

		63. 47
		″
Apr. 23	Q	10·66
30	Q	10·51

B.A.C. 3737.

		83. 25
		″
Mar. 24	Q	45·95
Apr. 12	Q	45·84

49 Leonis Minoris.

		71. 7
		″
Apr. 19	Q	26·08
20	L	24·90

57 Leonis.

		88. 50
		″
Mar. 16	L	33·20

Lalande 21095.

		63. 49
		″
Mar. 19	Q	53·48
	Reflexion.	
Mar. 19	Q	49·61

B.A.C. 3759.

		79. 20
		″
Mar. 17	Q	27·61
23	L	27·88

***d* Leonis.**

		85. 39
		″
Mar. 30	L	10·96

Lalande 21127.

		83. 45
		″
Apr. 21	Q	33·10
22	L	34·90

B.A.C. 3774.

	Obsr.	° ′
		121. 6
		″
Apr. 13	L	50·28
20	L	50·50

***a* Ursæ Majoris.**

		27. 30
		″
Sept. 29	Q	56·92

***a* Ursæ Majoris, S.P.**

		−27. 30
		″
Sept. 19	Q	56·76
30	L	53·39
Oct. 5	Q	53·80
28	L	54·54
31	L	53·61
Nov. 3	L	51·99
10	Q	54·45

Radcliffe 2594.

		1. 37
		″
Apr. 29	L	21·23

Radcliffe 2594, S.P.

		−1. 37
		″
Oct. 24	L	22·75
Nov. 8	L	22·15

p^1 Leonis.

		89. 16
		″
Apr. 25	L	10·87

B.A.C. 3785.

		85. 37
		″
Mar. 11	L	46·41

B.A.C. 3786.

		90. 32
		″
Mar. 29	Q	44·11
Apr. 1	L	43·84

Radcliffe 2612, S.P.

	Obsr.	° ′
		−3. 37
		″
Sept. 14	Q	23·39
Nov. 4	L	21·35

χ Leonis.

		81. 55
		″
Mar. 23	L	45·34
Apr. 30	Q	47·79

B.A.C. 3795.

		87. 23
		″
Mar. 12	Q	7·12
16	L	5·96
18	L	6·29
30	L	5·95

52 Leonis Minoris.

		63. 43
		″
Mar. 24	Q	39·27
Apr. 20	L	40·30

p^3 Leonis.

		87. 18
		″
Mar. 17	Q	22·53
Apr. 18	L	26·10

B.A.C. 3799.

		117. 59
		″
Apr. 13	L	34·05
22	L	34·67

B.A.C. 3808.

		72. 3
		″
May 7	Q	28·03

B.A.C. 3811.

		52. 57
		″
Apr. 19	Q	14·05
21	Q	13·00

p^4 Leonis.

	Obsʳ.	° ′ ″
		90. 35
Mar. 11	L	48·87
Apr. 1	L	48·52

B.A.C. 3823.

		119. 3
Mar. 23	L	25·59
Apr. 23	Q	27·68

B.A.C. 3824.

		74. 51
Apr. 12	Q	41·68

B.A.C. 3828.

		116. 4
Apr. 29	L	8·08

W.B. (1) xi. 100.

		76. 38
Mar. 12	Q	14·25
Apr. 20	L	16·77

B.A.C. 3844.

		76. 38
Apr. 19	Q	42·80
20	L	42·20

B.A.C. 3845.

		76. 24
Mar. 18	L	43·28

φ Leonis.

		92. 54
Apr. 18	L	32·66

W.B. (1) xi. 148.

		96. 23
Mar. 16	L	36·66

W.B. (1) xi. 161.

	Obsʳ.	° ′ ″
		76. 51
Mar. 17	Q	23·40

B.A.C. 3854.

		77. 16
Mar. 24	Q	16·01
Apr. 25	L	14·85

76 Leonis.

		87. 36
Mar. 11	L	17·31

δ Crateris.

		104. 2
Apr. 1	L	34·06
2	Q	34·62
May 14	Q	35·89

71 Leonis.

		71. 49
Mar. 19	Q	1·96
23	L	0·68
Apr. 21	Q	1·17

B.A.C. 3871.

		82. 40
Apr. 12	Q	4·86
14	Q	6·11
May 7	Q	7·26

B.A.C. 3873.

		89. 7
Apr. 23	Q	19·55

B.A.C. 3884.

		83. 30
Mar. 12	Q	46·76
Apr. 25	L	46·80

81 Leonis.

	Obsʳ.	° ′ ″
		72. 47
Apr. 19	Q	47·59
29	L	46·15

82 Leonis.

		85. 57
Apr. 1	L	0·85

Piazzi xi. 66.

		83. 30
Mar. 17	Q	14·26
18	L	14·84

τ Leonis.

		86. 23
Mar. 23	L	43·49
May 14	Q	42·74

B.A.C. 3904.

		27. 28
Mar. 29	Q	53·87
Reflexion.		
Mar. 29	Q	53·55

B.A.C. 3909.

		90. 6
Mar. 30	L	2·87

85 Leonis.

		73. 50
May 7	Q	9·48

Radcliffe 2705, S.P.

		−3. 37
Sept. 30	L	55·92

B.A.C. 3926.

		120. 20
Apr. 14	Q	13·33
19	Q	15·68

B.A.C. 3937.

	Obsʳ.	° ′ ″
		61. 28
Mar. 16	L	2·92

B.A.C. 3940.

		83. 8
Mar. 17	Q	14·50
19	Q	13·30
24	Q	15·54

B.A.C. 3948.

		122. 13
Mar. 30	L	53·14

B.A.C. 3947.

		82. 58
Apr. 22	L	41·13

ω Virginis.

		81. 6
Mar. 18	L	47·46

B.A.C. 3962.

		88. 17
Apr. 18	L	42·02

B.A.C. 3970.

		76. 57
Mar. 17	Q	21·56
Apr. 13	L	20·71
25	L	21·91

B.A.C. 3971.

		84. 30
Apr. 1	L	0·50
19	Q	1·19

B.A.C. 3975.

		95. 55
Mar. 24	Q	13·09

Radcliffe 2738, S.P.

	Obs^r.	° ′ ″
		−3. 42
Oct. 1	Q	45·83

β Leonis.

		74. 40
Mar. 29	Q	1·43
Apr. 29	L	3·30

Reflexion.

Mar. 29	Q	0·83
Apr. 29	L	5·83

B.A.C. 3996.

		84. 3
Apr. 1	L	18·68

β Virginis.

		87. 28
Apr. 18	L	11·00
19	Q	10·59

B.A.C. 4003.

		116. 31
Apr. 13	L	19·06

B.A.C. 4005.

		76. 57
Mar. 24	Q	54·49
30	L	56·91
Apr. 21	Q	55·86
25	L	56·40

Reflexion.

Apr. 21	Q	60·67

B.A.C. 4014.

		73. 48
Apr. 12	Q	17·68

B.A.C. 4019.

		88. 41
May 7	Q	31·55

γ Ursæ Majoris.

	Obs^r.	° ′ ″
		35. 32
Apr. 14	Q	56·51
25	L	54·98
Sept. 29	Q	58·10
Oct. 4	Q	57·54
Nov. 2	L	57·24

γ Ursæ Majoris, S.P.

		−35. 32
Sept. 29	Q	56·37
30	L	54·39
Oct. 5	Q	55·24
24	L	54·27
Nov. 4	L	54·54

A³ Virginis.

		80. 47
Mar. 23	L	59·19

B.A.C. 4029.

		88. 8
Apr. 1	L	46·11

B.A.C. 4032.

		117. 43
Mar. 30	L	7·63
Apr. 20	L	9·32

B.A.C. 4042.

		115. 9
Apr. 19	Q	4·09

31 Crateris.

		108. 54
Mar. 24	Q	8·19

π Virginis.

		82. 37
Mar. 30	L	37·35
Apr. 13	L	37·32

1 Comæ.

	Obs^r.	° ′ ″
		67. 8
Mar. 29	Q	52·11

2 Comæ.

		67. 46
Apr. 12	Q	58·70
21	Q	61·37

B.A.C. 4069.

		85. 40
Mar. 23	L	5·40
May 7	Q	7·15

Groombridge 1850.

		3. 39
Apr. 25	L	33·62

Groombridge 1850, S.P.

		−3. 39
Nov. 14	Q	33·58

Groombridge 1852.

		12. 19
Apr. 23	Q	63·54

Reflexion.

Apr. 23	Q	59·98

B.A.C. 4077.

		92. 22
Apr. 14	Q	26·70
22	L	25·73

B.A.C. 4083.

		88. 37
Mar. 24	Q	13·19
Apr. 13	L	15·01

10 Virginis.

	Obs^r.	° ′ ″
		87. 20
Apr. 18	L	17·98
19	Q	19·66

ε Corvi.

		111. 51
May 18	Q	49·16

3 Comæ.

		72. 26
Mar. 23	L	1·54
29	Q	1·35

12 Virginis.

		78. 58
Apr. 13	L	50·78

B.A.C. 4116.

		86. 58
Mar. 24	Q	55·86
Apr. 25	L	58·32
28	Q	58·91

Lalande 23040.

		70. 48
Apr. 12	Q	32·56

B.A.C. 4134. (1st star.)

		93. 11
Apr. 14	Q	59·35

B.A.C. 4134. (2nd star.)

		93. 11
Apr. 14	Q	38·69

B.A.C. 4136.

		98. 8
Mar. 30	L	45·23
May 18	Q	44·54

13 Virginis.

	Obsʳ.	° ′
		90. 1
		″
Mar. 23	L	51·95

W.B. (1) xii. 172.

		102. 47
Apr. 13	L	9·71

14 Virginis.

		98. 9
Mar. 29	Q	29·34

Groombridge 1871.

		2. 48
Apr. 20	L	27·51
May 7	Q	29·24
13	L	26·38
Reflexion.		
Apr. 20	L	29·00

Groombridge 1871, S.P.

		−2. 48
Nov. 16	Q	28·97
22	Q	29·88
24	Q	28·25

η Virginis.

		89. 54
Apr. 18	L	40·33

B.A.C. 4149.

		111. 25
Apr. 22	L	11·62

ζ Corvi.

		111. 27
Apr. 1	L	36·23

B.A.C. 4157.

	Obsʳ.	° ′
		102. 48
		″
Apr. 13	L	40·59
21	Q	40·47

B.A.C. 4171.

		96. 32
Mar. 24	Q	38·50
Apr. 25	L	44·00

B.A.C. 4178.

		63. 23
Apr. 23	Q	37·28
Reflexion.		
Apr. 23	Q	39·69

B.A.C. 4192.

		122. 4
Apr. 14	Q	34·56
22	L	29·15

B.A.C. 4204.

		84. 50
Mar. 29	Q	62·02
Apr. 1	L	59·38
21	Q	60·71

δ Corvi.

		105. 45
Apr. 13	L	29·09

B.A.C. 4220.

		93. 18
Mar. 24	Q	35·45

21 Comæ.

		64. 40
Apr. 19	Q	51·55

B.A.C. 4231.

		64. 48
May 14	Q	2·60

***q* Virginis.**

	Obsʳ.	° ′
		98. 42
		″
Mar. 23	L	4·45

B.A.C. 4233.

		56. 0
May 18	Q	0·67

β Corvi.

		112. 38
Apr. 12	Q	39·59
21	Q	38·77

κ Draconis, S.P.

		−19. 27
Nov. 3	L	39·43
Dec. 1	L	41·20

24 Comæ. (1st star.)

		70. 52
Apr. 14	Q	25·44

25 Comæ.

		72. 9
Mar. 24	Q	37·60
29	Q	38·35
Apr. 1	L	38·23

B.A.C. 4255.

		93. 37
May 13	L	29·89

χ Virginis.

		97. 14
Apr. 19	Q	49·86
20	L	48·81
May 17	M	47·51

27 Virginis.

		78. 49
Apr. 1	L	36·79

B.A.C. 4278.

	Obsʳ.	° ′
		117. 34
		″
Apr. 14	Q	39·88
21	Q	37·21

Groombridge 1923.

		5. 36
Apr. 23	Q	34·86

Groombridge 1923, S.P.

		−5. 36
Oct. 14	Q	31·23
Nov. 18	Q	34·25
26	Q	34·60

d^2 Virginis.

		81. 34
Mar. 29	Q	56·97
Apr. 12	Q	58·30
18	L	56·07

B.A.C. 4291.

		83. 18
Apr. 19	Q	17·06
May 7	Q	12·88

34 Virginis.

		77. 17
Mar. 30	L	52·92

35 Virginis.

		85. 41
Apr. 1	L	2·47
20	L	3·90

B.A.C. 4297.

		116. 51
May 14	Q	6·61

7 Draconis.
Reflexion.

	Obsʳ.	° ′ ″
		22. 27
Apr. 22	L	58·60

B.A.C. 4310.

		83. 1
Apr. 21	Q	51·21

39 Virginis.

		98. 19
Apr. 14	Q	25·96
23	Q	24·78

41 Virginis.

		76. 50
Apr. 1	L	29·96

ψ Virginis.

		98. 47
Apr. 19	Q	60·79
20	L	59·01

Groombridge 1940, S.P.

		−5. 50
Dec. 6	Q	52·26

B.A.C. 4336.

		81. 22
Mar. 30	L	35·87
Apr. 22	L	35·22

B.A.C. 4337.

		93. 46
Apr. 12	Q	7·06
13	L	8·13
25	L	7·76

46 Virginis.

		92. 38
Mar. 29	Q	12·27

ε Virginis.

	Obsʳ.	° ′ ″
		78. 18
May 30	Q	34·72
June 1	Q	33·77

40 Comæ.

		66. 39
May 24	Q	13·61

B.A.C. 4392.

		27. 13
Apr. 29	L	40·47
Reflexion.		
Apr. 29	L	42·76

B.A.C. 4394.

		98. 15
Apr. 25	L	19·94
May 7	Q	19·30

50 Virginis.

		99. 36
Mar. 23	L	11·43
May 17	M	12·06
18	Q	14·42

θ Virginis.

		94. 48
Jan. 1	L	42·19

B.A.C. 4431.

		87. 49
May 5	Q	12·56
24	Q	12·69

56 Virginis.

		99. 38
May 27	Q	53·80

B.A.C. 4437.

		120. 47
Apr. 23	Q	6·09

B.A.C. 4441.

	Obsʳ.	° ′ ″
		104. 49
Mar. 29	Q	37·68
30	L	39·87

58 Virginis.

		99. 49
Mar. 23	L	49·42

Groombridge 2006, S.P.

		−1. 37
Nov. 29	Q	15·12

σ Virginis.

		83. 48
May 17	M	46·46

B.A.C. 4455.

		100. 57
Apr. 29	L	23·23
May 24	Q	23·58

B.A.C. 4471.

		101. 51
Jan. 1	L	56·88

Spica.

		100. 26
Apr. 20	L	63·82
21	Q	64·15
May 5	Q	64·45
18	Q	62·62
July 11	Q	60·96
12	Q	62·41
Sept. 30	Q	(59·70)

B.A.C. 4488.

		106. 9
Apr. 1	L	6·13
14	Q	6·08
18	L	8·65

Groombridge 2007, S.P.

	Obsʳ.	° ′ ″
		−4. 32
Dec. 12	Q	1·95

B.A.C. 4503.

		85. 25
Apr. 23	Q	25·44
May 13	L	26·68
24	Q	25·45

71 Virginis.

		78. 28
Mar. 29	Q	30·65
June 1	Q	31·98

B.A.C. 4511.

		92. 20
Jan. 1	L	50·59
May 27	Q	53·88

Lalande 25006.

		65. 3
May 30	Q	51·27

B.A.C. 4513.

		65. 3
May 30	Q	35·35

73 Virginis.

		108. 1
Apr. 1	L	36·60
May 14	Q	36·66

h Virginis.

		99. 27
Apr. 20	L	48·17
21	Q	49·45

B.A.C. 4527.

	Obsʳ.	° ′ 10. 39 ″
Apr. 19	Q	13·99
May 7	Q	13·54

Reflexion.

Apr. 19	Q	10·93
May 7	Q	17·48

W.B. (1) xiii. 440.

		102. 38 ″
Apr. 14	Q	54·19

ζ Virginis.

		89. 53 ″
Jan. 1	L	56·76
Apr. 18	L	59·37

80 Virginis.

		96. 42 ″
June 3	Q	10·59

B.A.C. 4554.

		101. 23 ″
Apr. 12	Q	57·58

B.A.C. 4559.

		78. 33 ″
Apr. 21	Q	42·91
29	L	41·75

Radcliffe 3075.

		4. 1 ″
May 25	Q	48·21

Radcliffe 3075, S.P.

		−4. 1 ″
Nov. 10	Q	50·87
Dec. 1	L	(54·80)

B.A.C. 4572.

	Obsʳ.	° ′ 94. 48 ″
May 27	Q	45·57

83 Virginis.

		105. 29 ″
June 3	Q	38·57
6	Q	38·23

B.A.C. 4576.

		103. 32 ″
Apr. 14	Q	5·01

B.A.C. 4578.

		96. 57 ″
May 30	Q	3·22

B.A.C. 4593.

		96. 1 ″
May 24	Q	28·90

τ Boötis.

		71. 51 ″
May 7	Q	47·03

Reflexion.

May 7	Q	50·58

89 Virginis.

		107. 27 ″
Apr. 12	Q	21·34

B.A.C. 4621.

		70. 41 ″
Apr. 29	L	38·41

B.A.C. 4632.

		54. 52 ″
Apr. 14	Q	52·56

B.A.C. 4639.

	Obsʳ.	° ′ 106. 30 ″
Jan. 1	L	31·34
Apr. 21	Q	35·44

B.A.C. 4640.

		60. 40 ″
Apr. 19	Q	50·98

Reflexion.

Apr. 19	Q	53·37

η Boötis.

		70. 55 ″
Apr. 18	L	9·61
25	L	10·56
May 19	Q	8·40

Reflexion.

Apr. 18	L	8·42
25	L	7·07

92 Virginis.

		88. 16 ″
Apr. 22	L	58·30

47 Hydræ.

		114. 18 ″
May 14	Q	25·36

B.A.C. 4662.

		74. 41 ″
Apr. 29	L	4·86

10 Boötis.

		67. 38 ″
May 5	Q	21·62
13	L	17·50

B.A.C. 4665.

		92. 53 ″
June 6	Q	8·26

W.B. (1) xiii. 904.

	Obsʳ.	° ′ 97. 41 ″
May 7	Q	8·54

τ Virginis.

		87. 47 ″
June 10	Q	44·25

11 Boötis.

		61. 57 ″
Apr. 20	L	19·08

Reflexion.

Apr. 20	L	17·26

B.A.C. 4680.

		98. 36 ″
Apr. 23	Q	10·85
29	L	11·86

B.A.C. 4683.

		104. 12 ″
Apr. 19	Q	7·73

B.A.C. 4694.

		58. 29 ″
Apr. 14	Q	55·21
22	L	53·89
May 25	Q	55·05

B.A.C. 4697.

		101. 10 ″
Apr. 12	Q	53·50

B.A.C. 4702.

		101. 18 ″
May 7	Q	30·91
30	Q	29·69

Groombridge 2099.

	Obsr.	° ′
		3. 35
		″
May 14	Q	28·99
24	Q	31·90
27	Q	27·82
June 3	Q	30·03
8	Q	28·99

Groombridge 2099, S.P.

		−3. 35
		″
Jan. 5	Q	26·77

B.A.C. 4714.

		57. 3
		″
June 6	Q	48·02

B.A.C. 4713.

		86. 56
		″
Apr. 20	L	56·81

κ Virginis.

		99. 38
		″
Apr. 21	Q	22·22
22	L	20·53
May 18	Q	20·66
19	Q	22·51

3 Ursæ Minoris.

		14. 45
		″
Apr. 18	L	41·12

Reflexion.

Apr. 18	L	42·32

Arcturus.

		70. 6
		″
May 13	L	28·40
Sept. 30	Q	30·97

Reflexion.

May 13	L	27·11

B.A.C. 4739.

	Obsr.	° ′
		108. 5
		″
June 6	Q	4·54

λ Virginis.

		102. 44
		″
Apr. 21	Q	37·15
22	L	35·65
May 18	Q	37·07
19	Q	38·21
June 16	Q	36·79

B.A.C. 4750.

		96. 7
		″
Apr. 19	Q	7·28
June 7	Q	5·28

υ^2 Virginis.

		91. 21
		″
Apr. 23	Q	52·11
June 10	Q	51·43

B.A.C. 4764.
(1st star.)

		97. 8
		″
Apr. 18	L	30·65

B.A.C. 4764.
(2nd star.)

		97. 8
		″
Apr. 18	L	34·82

2 Libræ.

		101. 5
		″
Apr. 21	Q	30·02
22	L	28·57
May 30	Q	28·53
June 8	Q	28·00

B.A.C. 4771.

		81. 8
		″
May 7	Q	12·57
13	L	9·88
27	Q	11·47

B.A.C. 4777.

	Obsr.	° ′
		102. 44
		″
June 3	Q	12·49

***f* Boötis.**

		70. 9
		″
Apr. 18	L	37·04

106 Virginis.

		96. 17
		″
Apr. 19	Q	19·15
22	L	19·60

B.A.C. 4798.

		88. 33
		″
June 7	Q	47·80

B.A.C. 4800.

		114. 42
		″
Apr. 21	Q	30·79

B.A.C. 4803.

		57. 36
		″
May 7	Q	8·06
June 10	Q	7·48

ρ Boötis.

		59. 1
		″
May 14	Q	48·48
24	Q	49·21

Reflexion.

May 14	Q	48·30
24	Q	44·76

B.A.C. 4814.

		109. 50
		″
June 3	Q	26·46

B.A.C. 4824.

		99. 1
		″
May 30	Q	0·14

3 Libræ.

	Obsr.	° ′
		114. 26
		″
June 8	Q	16·10
13	Q	15·14

B.A.C. 4838.

		116. 8
		″
Apr. 21	Q	2·62
22	L	1·67

B.A.C. 4840.

		113. 28
		″
Apr. 20	L	16·26
23	Q	14·69

B.A.C. 4857.

		113. 33
		″
May 7	Q	4·13
June 10	Q	0·33

B.A.C. 4863.

		52. 39
		″
May 26	Q	44·95
June 16	Q	45·83

5 Libræ.

		104. 53
		″
May 24	Q	5·65
June 3	Q	4·62

ε Boötis.

		62. 21
		″
May 13	L	3·44
14	Q	3·47
18	Q	0·68
27	Q	1·19

Reflexion.

May 18	Q	3·71
27	Q	5·42

B.A.C. 4886.

	Obsr.	° ′ ″
		87. 23
Apr. 20	L	29·86

B.A.C. 4888.

		113. 40
Apr. 21	Q	61·29
22	L	58·62

α Libræ.

		105. 28
Jan. 3	L	28·33
Apr. 19	Q	31·10
June 13	Q	27·64
15	Q	30·26
16	Q	29·02
21	Q	29·44

10 Libræ.

		107. 47
June 6	Q	34·30

12 Libræ.

		114. 5
May 7	Q	4·46
13	L	2·75
June 7	Q	0·00

ξ¹ Libræ.

		101. 20
Apr. 23	Q	28·92
June 1	Q	29·71

ξ² Libræ.

		100. 51
Apr. 20	L	32·23

14 Libræ.

		114. 53
June 3	Q	31·12

B.A.C. 4926.

	Obsr.	° ′ ″
		75. 0
May 30	Q	8·25

β Ursæ Minoris.

		15. 17
May 14	Q	16·90
18	Q	20·33
24	Q	(15·92)
27	Q	19·22
Nov. 25	Q	18·63
Reflexion.		
May 14	Q	18·48
18	Q	19·13
24	Q	(25·19)
27	Q	20·15

β Ursæ Minoris, S.P.

		−15. 17
Nov. 22	Q	19·99
26	Q	19·74
Dec. 6	Q	19·65

B.A.C. 4941.

		92. 12
Apr. 21	Q	50·76
June 21	Q	49·53

B.A.C. 4945.

		97. 2
May 13	L	12·52
June 8	Q	10·06

Groombridge 2210.

		3. 29
May 26	Q	29·21
June 6	Q	28·02
7	Q	27·84
13	Q	27·70

Groombridge 2210, S.P.

	Obsr.	° ′ ″
		−3. 29
Jan. 1	L	27·05
4	L	26·98
Nov. 28	Q	26·99

ψ Boötis.

		62. 31
June 10	Q	12·81
11	Q	11·56

B.A.C. 4997.

		108. 35
May 7	Q	26·32
13	L	25·39

B.A.C. 4998.

		113. 30
May 26	Q	38·59

Groombridge 2213.

		5. 31
May 18	Q	25·89
30	Q	27·29

4 Serpentis.

		89. 7
May 13	L	20·36

Radcliffe 3362, S.P.

		−3. 58
Jan. 2	Q	19·30

o² Libræ.

		104. 38
May 13	L	47·41
June 27	Q	48·19

τ¹ Serpentis.

		74. 5
May 7	Q	33·27
June 21	Q	29·86

ζ¹ Libræ.

	Obsr.	° ′ ″
		106. 14
June 16	Q	23·93
30	Q	23·55

B.A.C. 5090.

		118. 23
June 13	Q	24·06

B.A.C. 5109.

		109. 12
May 27	Q	15·48

11 Serpentis.

		90. 43
June 21	Q	20·35

B.A.C. 5126.

		73. 31
June 15	Q	32·12

γ Libræ.

		104. 19
Apr. 22	L	59·19
June 16	Q	60·31

α Coronæ.

		62. 49
June 7	Q	34·41
8	Q	30·44
30	Q	31·94
Reflexion.		
June 7	Q	33·82
8	Q	33·16

B.A.C. 5167.

		118. 51
June 13	Q	29·08

κ Libræ.

	Obsr.	109° 14′
Apr. 22	L	6″·92
May 24	Q	10·10
27	Q	7·16

τ⁶ Serpentis.

		73° 32′
June 21	Q	5″·96

χ Serpentis.

		76° 42′
May 18	Q	50″·08

θ Ursæ Minoris.

		12° 11′
June 3	Q	62″·32
6	Q	59·89
Reflexion.		
June 3	Q	56·81
6	Q	60·29

τ⁷ Serpentis.

		71° 6′
June 27	Q	2″·85

a Serpentis.

		83° 8′
May 26	Q	38″·61
June 11	Q	41·22
30	Q	38·79

τ⁸ Serpentis.

		72° 18′
May 7	Q	21″·82

A² Serpentis.

		91° 22′
June 15	Q	32″·59

ω Serpentis.

	Obsr.	87° 23′
June 13	Q	10″·32

ε Serpentis.

		85° 6′
June 1	Q	37″·76

θ Libræ.

		106° 19′
May 24	Q	40″·62

B.A.C. 5258.

		116° 55′
May 7	Q	55″·32
26	Q	55·93

Radcliffe 3475.

		4° 43′
June 21	Q	56″·66

Radcliffe 3475, S.P.

		−4° 43′
Jan. 29	L	58″·31

ζ Ursæ Minoris.

		11° 47′
June 7	Q	19″·79
8	Q	20·01
Reflexion.		
June 7	Q	15·74
8	Q	21·75

ζ Ursæ Minoris, S.P.

		−11° 47′
Nov. 29	Q	19″·45
Dec. 1	L	19·88
6	Q	20·29
12	Q	20·88

γ Serpentis.

	Obsr.	73° 53′
June 3	Q	31″·54
6	Q	34·95
Reflexion.		
June 3	Q	34·04
6	Q	35·62

δ Scorpii.

		112° 13′
June 30	Q	53″·27

50 Libræ.

		98° 1′
May 7	Q	27″·78

11 Scorpii.

		102° 22′
May 24	Q	38″·80

B.A.C. 5354.

		113° 19′
May 27	Q	9″·16

c¹ Scorpii.

		118° 3′
June 3	Q	38″·95

Radcliffe 3523.

		4° 18′
June 15	Q	47″·09

Radcliffe 3523, S.P.

		−4° 18′
Jan. 16	Q	47″·39
21	Q	46·17

Radcliffe 3522.

		5° 59′
June 16	Q	38″·22

B.A.C. 5408.

	Obsr.	108° 11′
June 8	Q	2″·37

δ Ophiuchi.

		93° 20′
May 26	Q	29″·79
June 1	Q	31·03
30	Q	31·19

B.A.C. 5436.

		109° 52′
June 6	Q	61″·04
7	Q	59·68

19 Ursæ Minoris.

		13° 46′
June 11	Q	52″·29
13	Q	(46·72)
Reflexion.		
June 11	Q	53·03
13	Q	53·20

B.A.C. 5464.

		119° 23′
June 8	Q	5″·23

* R.A. $16^h\ 17^m\ 26^s$. (South star.)

		113° 7′
July 5	Q	53″·81

* R.A. $16^h\ 17^m\ 26^s$. (North star.)

		113° 7′
July 5	Q	47″·35

B.A.C. 5478.

		113° 5′
July 4	Q	19″·19

23 Herculis.

	Obs^r.	° ′
		57. 20
		″
June 16	Q	52·04

Antares.

		116. 7
		″
June 21	Q	38·77
July 12	Q	35·83

B.A.C. 5537.

		79. 20
		″
June 16	Q	28·77

32 Herculis.

		59. 12
		″
June 6	Q	48·96

33 Herculis.

		82. 36
		″
July 12	Q	48·04

B.A.C. 5563.

		76. 2
		″
June 21	Q	7·16

B.A.C. 5567.

		110. 8
		″
July 13	Q	23·86

B.A.C. 5587.

		77. 20
		″
June 3	Q	17·46

B.A.C. 5597.

		64. 52
		″
June 11	Q	37·45
13	Q	35·71

Reflexion.

June 11	Q	36·07
13	Q	35·76

B.A.C. 5600.

	Obs^r.	° ′
		117. 11
		″
June 6	Q	48·69
July 14	Q	49·53

ζ Herculis.

		58. 8
		″
June 15	Q	57·62

Reflexion.

June 15	Q	57·72

B.A.C. 5619.

		55. 42
		″
June 16	Q	31·75

B.A.C. 5620.

		74. 0
		″
July 12	Q	2·16

l Herculis.

		84. 30
		″
July 6	Q	24·09

B.A.C. 5634.

		78. 37
		″
July 20	Q	28·26

B.A.C. 5641.

		114. 35
		″
July 4	Q	49·92

B.A.C. 5642.

		106. 18
		″
June 3	Q	34·70

B.A.C. 5647.

		76. 29
		″
June 8	Q	53·46

48 Herculis.

	Obs^r.	° ′
		59. 47
		″
June 6	Q	59·71

B.A.C. 5663.

		110. 11
		″
June 21	Q	6·23
July 19	Q	7·25

B.A.C. 5671.

		120. 21
		″
July 13	Q	38·64

51 Herculis.

		65. 6
		″
July 5	Q	47·17
16	Q	46·97

B.A.C. 5687.

		115. 18
		″
June 13	Q	39·10

B.A.C. 5695.

		106. 35
		″
June 16	Q	12·62

24 Ophiuchi.

		112. 55
		″
July 14	Q	50·73

κ Ophiuchi.

		80. 24
		″
June 11	Q	39·45

57 Herculis.

		64. 26
		″
June 8	Q	4·69

B.A.C. 5716.

		74. 20
		″
June 6	Q	26·39

B.A.C. 5730.

	Obs^r.	° ′
		114. 2
		″
July 5	Q	35·66

B.A.C. 5737.

		118. 22
		″
June 16	Q	36·40
21	Q	36·78

B.A.C. 5758.

		111. 22
		″
June 13	Q	21·58

B.A.C. 5759.

		116. 19
		″
July 14	Q	32·61

B.A.C. 5767.

		114. 48
		″
June 8	Q	52·02

ε Ursæ Minoris.

		7. 44
		″
June 15	Q	40·17

Reflexion.

June 15	Q	40·72

B.A.C. 5774.

		90. 53
		″
July 12	Q	48·80

η Ophiuchi.

		105. 33
		″
July 16	Q	13·41
Oct. 6	Q	11·22

Radcliffe 3685.

		5. 7
		″
June 11	Q	3·83
July 4	Q	3·79
5	Q	3·31

Radcliffe 3685, S.P.

	Obs^r.	° ′
		−5. 7
		″
Feb. 4	Q	3·28

α Herculis.

		75. 27
		″
July 19	Q	9·14

38 Ophiuchi.

		116. 28
		″
June 16	Q	30·83

B.A.C. 5838.

		119. 13
		″
July 13	Q	9·77

θ Ophiuchi.

		114. 51
		″
July 16	Q	38·66
Aug. 6	Q	38·93
13	Q	38·11

B.A.C. 5862.

		113. 42
		″
July 12	Q	42·95

b Ophiuchi.

		114. 2
		″
Aug. 13	Q	49·80

O.A.(S.Z.)16772–3.

		116. 12
		″
June 13	Q	32·27

B.A.C. 5878.

		115. 49
		″
July 20	Q	10·64

B.A.C. 5880.

		111. 20
		″
July 21	Q	46·27

Lalande 31726.

	Obs^r.	° ′
		82. 22
		″
June 16	Q	28·11

σ Ophiuchi.

		85. 44
		″
July 6	Q	19·45
19	Q	20·64

B.A.C. 5909.

		116. 9
		″
July 13	Q	37·69

B.A.C. 5920.

		107. 23
		″
June 15	Q	42·53
July 4	Q	42·62
5	Q	41·10

B.A.C. 5927.

		58. 44
		″
July 14	Q	18·52

78 Herculis.

		61. 29
		″
July 20	Q	31·04
Aug. 1	Q	33·44

α Ophiuchi.

		77. 20
		″
Aug. 6	Q	19·54
23	Q	19·33

56 Ophiuchi.

		76. 46
		″
June 16	Q	12·40
July 21	Q	10·97

B.A.C. 5985.

		83. 36
		″
July 19	Q	52·08

B.A.C. 5989.

	Obs^r.	° ′
		113. 36
		″
July 20	Q	45·48

β Ophiuchi.

		85. 22
		″
Aug. 6	Q	24·34
23	Q	24·54

B.A.C. 6015.

		116. 55
		″
July 5	Q	23·61
12	Q	23·26

μ Herculis.

		62. 11
		″
July 6	Q	50·29
16	Q	52·84

B.A.C. 6023.

		114. 9
		″
July 14	Q	33·04
29	Q	34·27

B.A.C. 6035.

		80. 6
		″
July 21	Q	25·67

B.A.C. 6041.

		109. 4
		″
Aug. 12	Q	56·21

B.A.C. 6054.

		101. 18
		″
July 4	Q	21·45
Aug. 1	Q	20·99

B.A.C. 6060.

		108. 46
		″
July 20	Q	28·43

B.A.C. 6066.

	Obs^r.	° ′
		113. 54
		″
Aug. 6	Q	58·74

B.A.C. 6069.

		89. 18
		″
July 12	Q	20·19

89 Herculis.

		63. 55
		″
Aug. 13	Q	34·21
23	Q	35·04

B.A.C. 6075.

		119. 22
		″
July 5	Q	22·91

B.A.C. 6081.

		110. 19
		″
July 14	Q	34·10

γ Draconis, S.P.

		−38. 29
		″
Feb. 18	Q	37·06
Mar. 4	L	37·34
12	Q	37·14

B.A.C. 6099.

		112. 42
		″
July 13	Q	53·48

68 Ophiuchi.

		88. 41
		″
July 16	Q	20·65
21	Q	20·34

95 Herculis.
(1st star.)

		68. 24
		″
July 6	Q	3·91
30	Q	5·75
Aug. 8	Q	6·73

95 Herculis. (2nd star.)

	Obsr.	° ′ ″
		68. 24
July 30	Q	4·86
Aug. 8	Q	4·10

γ^1 Sagittarii.

	Obsr.	° ′ ″
		119. 34
July 4	Q	57·30

97 Herculis.

	Obsr.	° ′ ″
		67. 4
July 29	Q	31·98

B.A.C. 6127.

	Obsr.	° ′ ″
		118. 28
Aug. 29	L	7·88

B.A.C. 6137.

	Obsr.	° ′ ″
		87. 31
July 12	Q	57·91

72 Ophiuchi.

	Obsr.	° ′ ″
		80. 27
July 19	Q	10·35
Aug. 12	Q	8·33
15	Q	9·23
18	Q	10·72
20	Q	10·75

B.A.C. 6158.

	Obsr.	° ′ ″
		109. 51
July 5	Q	54·82

B.A.C. 6161.

	Obsr.	° ′ ″
		113. 43
July 14	Q	32·42

μ Sagittarii.

	Obsr.	° ′ ″
		111. 5
July 16	Q	30·54
23	Q	27·20
Aug. 6	Q	28·72
8	Q	27·57
Oct. 7	Q	28·97

O. A. (S.Z.) 17876.

	Obsr.	° ′ ″
		119. 51
Aug. 29	L	34·70

16 Sagittarii.

	Obsr.	° ′ ″
		110. 25
July 4	Q	29·08
13	Q	29·19

17 Sagittarii.

	Obsr.	° ′ ″
		110. 35
Aug. 15	Q	8·21

B.A.C. 6196.

	Obsr.	° ′ ″
		93. 2
Aug. 12	Q	29·89

B.A.C. 6210.

	Obsr.	° ′ ″
		105. 53
July 5	Q	2·92

Radcliffe 3900, S.P.

	Obsr.	° ′ ″
		−5. 36
Mar. 1	Q	16·50

η Serpentis.

	Obsr.	° ′ ″
		92. 55
Aug. 20	Q	52·09
26	Q	53·69

δ Ursæ Minoris.

	Obsr.	° ′ ″
		3. 23
July 6	Q	47·05
12	Q	47·81
13	Q	47·95
14	Q	47·58
16	Q	46·93
19	Q	47·88
20	Q	46·98
21	Q	48·64
23	Q	47·18
29	Q	48·16
30	Q	47·35
Aug. 1	Q	47·95
6	Q	48·54
8	Q	47·74
9	Q	49·23
10	Q	47·16
16	Q	47·35
18	Q	47·61
29	L	48·22
31	L	47·23
Sept. 1	Q	48·38

δ Ursæ Minoris, S.P.

	Obsr.	° ′ ″
		−3. 23
Jan. 30	Q	47·60
Feb. 8	L	46·36
9	Q	46·42
13	Q	49·11
16	Q	48·33
17	L	47·25
18	Q	45·76
23	Q	47·48
Mar. 10	Q	46·39
17	Q	45·97
Aug. 31	L	(54·15)

21 Sagittarii.

	Obsr.	° ′ ″
		110. 36
Aug. 13	Q	40·04

B.A.C. 6260.

	Obsr.	° ′ ″
		119. 53
Aug. 15	Q	44·24

λ Sagittarii.

	Obsr.	° ′ ″
		115. 29
Aug. 12	Q	33·78

B.A.C. 6294.

	Obsr.	° ′ ″
		108. 29
July 14	Q	33·58
Aug. 18	Q	37·12
26	Q	33·47

B.A.C. 6295.

	Obsr.	° ′ ″
		119. 16
Aug. 29	L	59·22

O. A. (S.Z.) 18344.

	Obsr.	° ′ ″
		105. 16
July 5	Q	29·91

B.A.C. 6301.

	Obsr.	° ′ ″
		109. 3
Sept. 1	Q	58·62

B.A.C. 6304.

	Obsr.	° ′ ″
		114. 12
July 4	Q	18·64

24 Sagittarii.

	Obsr.	° ′ ″
		114. 7
July 23	Q	48·49
Aug. 31	L	51·08

B.A.C. 6327.

	Obsr.	° ′ ″
		118. 36
Aug. 29	L	59·76

2 Aquilæ.

	Obsr.	° ′ ″
		99. 10
Sept. 1	Q	45·68
9	Q	46·32

4 Aquilæ.

	Obsr.	° ′ 88. 4 ″
Aug. 26	Q	29·42

5 Aquilæ. (1st star.)

		91. 6 ″
July 4	Q	7·90
5	Q	10·48

5 Aquilæ. (2nd star.)

		91. 6 ″
July 4	Q	12·79
5	Q	14·94

B.A.C. 6401.

		116. 55 ″
Aug. 31	L	20·34

B.A.C. 6422.

		117. 55 ″
Aug. 29	L	5·06

β¹ Lyræ.

		56. 47 ″
Sept. 9	Q	32·33
26	L	35·53
Reflexion.		
Sept. 26	L	34·98

33 Sagittarii.

		111. 31 ″
July 21	Q	22·90
Aug. 6	Q	22·83
Sept. 28	L	22·97

B.A.C. 6448.

		113. 20 ″
July 5	Q	37·00
20	Q	37·13
Aug. 12	Q	36·31

B.A.C. 6450.

	Obsr.	° ′ 113. 19 ″
Aug. 31	L	3·92
Sept. 5	Q	2·22

ξ¹ Sagittarii.

		110. 49 ″
July 13	Q	50·29
Aug. 10	Q	51·87

10 Aquilæ.

		76. 16 ″
July 19	Q	25·37

11 Aquilæ.

		76. 33 ″
July 29	Q	22·02

B.A.C. 6485.

		112. 53 ″
Aug. 29	L	3·64
31	L	2·96

ε Aquilæ.

		75. 6 ″
July 16	Q	49·82
Aug. 16	Q	51·20
26	Q	48·78
Sept. 19	Q	49·73
21	Q	50·28

λ Lyræ.

		58. 2 ″
Aug. 6	Q	33·93

g Aquilæ.

		93. 53 ″
July 23	Q	36·59

B.A.C. 6513.

		114. 52 ″
July 21	Q	31·07

B.A.C. 6519.

	Obsr.	° ′ 105. 51 ″
Sept. 9	Q	42·46

B.A.C. 6524.

		112. 42 ″
Aug. 29	L	10·96
31	L	11·47

Radcliffe 4208.

		3. 27 ″
Aug. 12	Q	59·79
13	Q	57·08
Sept. 26	L	60·22
Reflexion.		
Sept. 26	L	56·35

Radcliffe 4208, S.P.

		−3. 28 ″
Mar. 4	L	2·05

B.A.C. 6527.

		71. 4 ″
July 14	Q	28·54

ζ Aquilæ.

		76. 20 ″
Aug. 10	Q	13·94
18	Q	11·34
Sept. 28	L	11·45
Reflexion.		
Sept. 28	L	7·75

B.A.C. 6544.

		109. 9 ″
Sept. 27	Q	51·60

B.A.C. 6560.

		104. 48 ″
July 29	Q	25·17
30	Q	23·66

19 Lyræ.

	Obsr.	° ′ 58. 56 ″
Aug. 16	Q	25·31

B.A.C. 6574.

		68. 40 ″
July 16	Q	20·78
19	Q	20·34

ψ Sagittarii.

		115. 29 ″
Aug. 20	Q	19·90
26	Q	17·58
31	L	18·23
Sept. 5	Q	17·32
9	Q	15·29
10	Q	15·73
19	Q	16·85

B.A.C. 6576.

		114. 24 ″
Sept. 28	L	30·47

***d* Sagittarii.**

		109. 11 ″
July 14	Q	31·14
Aug. 1	Q	32·19

ω Aquilæ.

		78. 38 ″
Aug. 10	Q	52·44
12	Q	50·73
18	Q	50·58
Sept. 27	Q	51·33
28	L	52·05

B.A.C. 6604.

		114. 27 ″
Aug. 29	L	14·56

B.A.C. 6627.

		121. 3 ″
Sept. 24	M	30·88

χ¹ Sagittarii.

	Obsr.	° ′
		114. 46
		″
July 21	Q	10·67
Aug. 9	Q	9·68

B.A.C. 6641.

		111. 30
		″
July 20	Q	42·02
Sept. 28	L	43·06

δ Aquilæ.

		87. 9
		″
July 30	Q	13·35
Aug. 12	Q	14·17
16	Q	15·06
Sept. 5	Q	14·56
9	Q	13·09
10	Q	15·34
27	Q	15·33

B.A.C. 6651.

		53. 48
		″
July 23	Q	54·60

B.A.C. 6658.

		108. 37
		″
Aug. 23	Q	52·53

5 Vulpeculæ.

		70. 10
		″
July 14	Q	13·43
16	Q	10·25
Aug. 6	Q	11·16

Reflexion.

Aug. 6	Q	13·95

4 Cygni.

		53. 57
		″
Aug. 26	Q	10·81

B.A.C. 6671.

	Obsr.	° ′
		111. 35
		″
Aug. 31	L	33·14

α Vulpeculæ.

		65. 36
		″
Aug. 18	Q	28·92

7 Vulpeculæ.

		69. 59
		″
Aug. 20	Q	52·93
Sept. 28	L	55·26

B.A.C. 6677.

		118. 29
		″
Aug. 10	Q	46·37
29	L	45·13

B.A.C. 6682.

		118. 16
		″
Sept. 30	L	33·96

B.A.C. 6695.

		69. 21
		″
Aug. 1	Q	28·59
13	Q	27·15

8 Cygni.

		55. 50
		″
Sept. 24	M	2·04

h² Sagittarii.

		115. 10
		″
July 19	Q	49·33
30	Q	50·61
Aug. 24	Q	51·35
Sept. 5	Q	49·28

B.A.C. 6707.

		109. 9
		″
July 20	Q	10·04

9 Vulpeculæ.

	Obsr.	° ′
		70. 31
		″
July 16	Q	17·31
21	Q	17·45

Groombridge 2900.

		10. 40
		″
Aug. 6	Q	23·05

Reflexion.

Aug. 6	Q	21·75

B.A.C. 6716.

		118. 54
		″
Aug. 23	Q	40·24

W.B. (2) xix. 943.

		65. 17
		″
Sept. 27	Q	59·96

11 Cygni.

		53. 21
		″
Sept. 13	Q	22·65

Reflexion.

Sept. 13	Q	25·31

45 Aquilæ.

		90. 56
		″
July 23	Q	1·68
Sept. 19	Q	1·37

B.A.C. 6738.

		115. 10
		″
Aug. 12	Q	24·90

46 Aquilæ.

		78. 7
		″
July 29	Q	25·84
Aug. 9	Q	28·91
20	Q	24·13

Piazzi xix. 248.

	Obsr.	° ′
		82. 44
		″
Aug. 10	Q	6·31

10 Vulpeculæ.

		64. 33
		″
July 19	Q	6·13
20	Q	5·01

ψ Aquilæ.

		77. 1
		″
Aug. 1	Q	17·96
18	Q	13·22
Sept. 24	M	14·85

υ Aquilæ.

		82. 42
		″
July 21	Q	49·66

*** R.A. $19^h\,39^m\,21^s$.**

		118. 49
		″
Aug. 31	L	22·85
Sept. 26	L	21·97

γ Aquilæ.

		79. 42
		″
Aug. 16	Q	57·33
24	Q	60·28
Sept. 3	Q	55·29
10	Q	57·10
17	Q	59·13

B.A.C. 6776.

		104. 2
		″
Sept. 30	L	9·87

Radcliffe 4476.

		4. 11
		″
Sept. 28	L	59·77

α Aquilæ.

		81. 29
		″
Sept. 19	Q	18·22

12 Vulpeculæ.

	Obsr.	° ′ 67. 44 ″
July 30	Q	1·44
Aug. 23	Q	0·60

B.A.C. 6814.

		114. 16 ″
Aug. 10	Q	35·60
31	L	(37·76)
Sept. 5	Q	31·36

B.A.C. 6815.

		93. 27 ″
July 20	Q	51·06

9 Sagittæ.

		71. 40 ″
Sept. 30	L	33·43

56 Aquilæ.

		98. 55 ″
Sept. 27	Q	29·15

ε Draconis.

		20. 4 ″
Aug. 29	L	43·85
Sept. 13	Q	43·51

Reflexion.

Aug. 29	L	41·83
Sept. 13	Q	44·30

β Aquilæ.

		83. 55 ″
Aug. 9	Q	51·88
Sept. 12	Q	51·70
23	Q	48·77

φ Aquilæ.

		78. 56 ″
Aug. 20	Q	7·02

10 Sagittæ.

	Obsr.	° ′ 73. 43 ″
July 21	Q	22·50

B.A.C. 6850.

		112. 34 ″
July 29	Q	39·02
Aug. 6	Q	36·85
26	Q	37·70

B.A.C. 6854.

		118. 56 ″
Sept. 24	M	13·90
30	L	19·56

c Sagittarii.

		118. 5 ″
Aug. 31	L	8·95

16 Vulpeculæ.

		65. 26 ″
July 30	Q	26·13
Aug. 10	Q	28·93

λ Ursæ Minoris.

		1. 5 ″
Aug. 12	Q	56·77
13	Q	53·31
24	Q	54·32
26	Q	54·85
Sept. 5	Q	55·05
12	Q	54·56
13	Q	56·47
19	Q	55·17
26	L	55·55

Reflexion.

Aug. 12	Q	54·93
13	Q	53·50

λ Ursæ Minoris, S.P.

	Obsr.	° ′ −1. 5 ″
Feb. 17	L	54·29
Mar. 12	Q	55·56
19	L	54·76
24	Q	55·59
29	Q	54·15

Reflexion.

Feb. 17	L	53·62

B.A.C. 6903.

		109. 11 ″
Sept. 24	M	40·10

B.A.C. 6920.

		115. 40 ″
Aug. 31	L	47·21

θ Aquilæ.

		91. 13 ″
Aug. 9	Q	22·35
16	Q	21·00

66 Aquilæ.

		91. 24 ″
July 29	Q	53·25
Aug. 6	Q	53·49
Sept. 28	L	54·32

B.A.C. 6949.

		101. 18 ″
Sept. 27	Q	0·16

B.A.C. 6953.

		106. 42 ″
July 30	Q	25·56

21 Vulpeculæ.

		61. 42 ″
Aug. 29	L	56·07

21 Vulpeculæ.
Reflexion.

	Obsr.	° ′ 61. 42 ″
Aug. 29	L	53·98

α¹ Capricorni.

		102. 55 ″
Oct. 3	Q	33·77
4	Q	34·76

α² Capricorni.

		102. 57 ″
Sept. 17	Q	50·51
24	M	51·02

B.A.C. 6982.

		115. 38 ″
Aug. 31	L	47·61

B.A.C. 6987.

		110. 4 ″
Sept. 28	L	16·46
30	L	16·20

κ Cephei, S.P.

		−12. 41 ″
Feb. 17	L	59·05
23	Q	61·64
Mar. 1	Q	60·35
Apr. 13	L	59·95

B.A.C. 7009.

		104. 41 ″
Aug. 10	Q	24·98

25 Vulpeculæ.

		65. 59 ″
Aug. 6	Q	9·54
16	Q	8·94

B.A.C. 7019.

	Obsr.	° ′ ″
		109. 52
Sept. 5	Q	19·46
24	M	17·47

B.A.C. 7023.

	Obsr.	° ′ ″
		102. 8
July 29	Q	35·31
Sept. 30	L	36·74

B.A.C. 7026.

	Obsr.	° ′ ″
		119. 30
Sept. 27	Q	49·90

B.A.C. 7030.

	Obsr.	° ′ ″
		119. 15
Aug. 29	L	28·38

B.A.C. 7034.

	Obsr.	° ′ ″
		116. 3
Aug. 26	Q	11·64

ρ Capricorni.

	Obsr.	° ′ ″
		108. 15
July 30	Q	38·60
Aug. 9	Q	40·48
24	Q	39·00
31	L	40·27
Sept. 17	Q	40·01
26	L	40·60
Oct. 3	Q	37·95

68 Aquilæ.

	Obsr.	° ′ ″
		93. 48
Sept. 28	L	18·96

ο Capricorni.

	Obsr.	° ′ ″
		109. 1
Oct. 4	Q	50·65

40 Cygni.

	Obsr.	° ′ ″
		52. 0
Aug. 20	Q	18·43

B.A.C. 7057.

	Obsr.	° ′ ″
		119. 33
Sept. 30	L	56·58

B.A.C. 7087.

	Obsr.	° ′ ″
		104. 11
Sept. 24	M	7·72
Oct. 5	Q	8·70

ε Delphini.

	Obsr.	° ′ ″
		79. 9
Aug. 12	Q	21·69
13	Q	21·87
16	Q	24·15
Sept. 21	Q	24·23
Reflexion.		
Aug. 12	Q	22·81
13	Q	24·76

η Delphini.

	Obsr.	° ′ ″
		77. 26
Aug. 6	Q	11·02

B.A.C. 7097.

	Obsr.	° ′ ″
		106. 59
Aug. 10	Q	28·97

π¹ Capricorni.

	Obsr.	° ′ ″
		105. 36
July 30	Q	57·66
Sept. 26	L	60·07

B.A.C. 7111.

	Obsr.	° ′ ″
		112. 54
Sept. 30	L	55·87

B.A.C. 7113.

	Obsr.	° ′ ″
		114. 42
Aug. 31	L	1·47

B.A.C. 7130.

	Obsr.	° ′ ″
		92. 53
Sept. 28	L	20·92
Oct. 6	Q	20·37

W.B. (1) xx. 827.

	Obsr.	° ′ ″
		74. 38
Sept. 17	Q	14·72

α Delphini.

	Obsr.	° ′ ″
		74. 33
Oct. 3	Q	55·06

B.A.C. 7151.

	Obsr.	° ′ ″
		107. 51
Sept. 24	M	31·14

B.A.C. 7159.

	Obsr.	° ′ ″
		108. 35
Oct. 4	Q	38·24
5	Q	36·93

α Cygni.

	Obsr.	° ′ ″
		45. 12
Mar. 11	L	16·30

B.A.C. 7170.

	Obsr.	° ′ ″
		117. 44
Sept. 26	L	17·14

B.A.C. 7172.

	Obsr.	° ′ ″
		94. 24
Aug. 6	Q	12·98
13	Q	12·89
18	Q	14·05

Radcliffe 4980.

	Obsr.	° ′ ″
		2. 29
Sept. 27	Q	9·42
30	L	14·46

B.A.C. 7180.

	Obsr.	° ′ ″
		114. 12
Aug. 10	Q	61·68
Oct. 7	Q	58·97

ε Aquarii.

	Obsr.	° ′ ″
		99. 59
Sept. 28	L	30·36

B.A.C. 7230.

	Obsr.	° ′ ″
		6. 51
Aug. 26	Q	1·08
Reflexion.		
Aug. 26	Q	3·01

B.A.C. 7216.

	Obsr.	° ′ ″
		115. 28
Sept. 19	Q	54·89
26	L	57·08

B.A.C. 7232.

	Obsr.	° ′ ″
		101. 56
Sept. 5	Q	46·21
Oct. 3	Q	47·27

B.A.C. 7237.

	Obsr.	° ′ ″
		114. 17
Aug. 29	L	27·19
Oct. 5	Q	21·98

μ Aquarii.

	Obsr.	° ′ ″
		99. 29
Sept. 13	Q	28·99

B.A.C. 7247.

	Obsr.	° ′ ″
		97. 24
Aug. 13	Q	6·53

B.A.C. 7248.

	Obsr.	° ′
		109. 18
		″
Aug. 9	Q	25·49
Sept. 30	L	25·01

B.A.C. 7255.

	Obsr.	° ′
		85. 59
		″
Aug. 24	Q	7·03
Sept. 26	L	7·73

32 Vulpeculæ.

	Obsr.	° ′
		62. 27
		″
Aug. 16	Q	29·52
Sept. 21	Q	29·40
Oct. 4	Q	29·32
6	Q	29·54
7	Q	28·34

17 Delphini.

	Obsr.	° ′
		76. 47
		″
Sept. 27	Q	43·92

B.A.C. 7263.

	Obsr.	° ′
		106. 33
		″
Aug. 18	Q	9·53

33 Vulpeculæ.

	Obsr.	° ′
		68. 11
		″
Aug. 10	Q	56·82

B.A.C. 7285.

	Obsr.	° ′
		83. 0
		″
Aug. 6	Q	43·67
Oct. 5	Q	43·23

B.A.C. 7287.

	Obsr.	° ′
		117. 24
		″
Sept. 5	Q	36·50
30	L	36·13

Radcliffe 5090, S.P.

	Obsr.	° ′
		−4. 50
		″
Mar. 30	L	39·27

3 Equulei.

	Obsr.	° ′
		85. 2
		″
Aug. 12	Q	8·28
Sept. 26	L	10·67

θ Capricorni.

	Obsr.	° ′
		107. 46
		″
Aug. 18	Q	16·90
Sept. 19	Q	16·76
27	Q	15·51
29	Q	15·74
Oct. 3	Q	15·39
5	Q	15·62
6	Q	17·02
7	Q	14·88

A Capricorni.

	Obsr.	° ′
		115. 32
		″
Aug. 13	Q	51·14
24	Q	50·84

26 Capricorni.

	Obsr.	° ′
		110. 44
		″
Aug. 10	Q	29·41

ν Aquarii.

	Obsr.	° ′
		101. 55
		″
Sept. 13	Q	14·13
Nov. 7	L	15·55

γ Equulei.

	Obsr.	° ′
		80. 24
		″
Oct. 4	Q	50·83

ζ Cygni.

	Obsr.	° ′
		60. 19
		″
Mar. 11	Q	44·78
Aug. 26	Q	44·98
31	L	(39·98)

ζ Cygni. (*concluded.*)

	Obsr.	° ′
		60. 19
		″
Sept. 21	Q	45·68
23	Q	46·27
30	L	46·30
Oct. 24	L	42·47
31	L	45·98
Reflexion.		
Aug. 26	Q	44·91
31	L	43·78
Sept. 30	L	44·35
Oct. 24	L	45·07
31	L	43·94

φ Capricorni.

	Obsr.	° ′
		111. 12
		″
Sept. 28	L	53·04

B.A.C. 7373.

	Obsr.	° ′
		53. 55
		″
Aug. 12	Q	35·61

14 Aquarii.

	Obsr.	° ′
		99. 46
		″
Aug. 10	Q	48·82

α Equulei.

	Obsr.	° ′
		85. 18
		″
Sept. 29	Q	45·90
Oct. 6	Q	46·33

30 Capricorni.

	Obsr.	° ′
		108. 33
		″
Aug. 29	L	(14·04)
Oct. 3	Q	8·68

15 Aquarii.

	Obsr.	° ′
		95. 5
		″
Aug. 13	Q	19·88

16 Aquarii.

	Obsr.	° ′
		95. 8
		″
Aug. 18	Q	8·11

ι Capricorni.

	Obsr.	° ′
		107. 24
		″
Aug. 24	Q	43·07
Sept. 24	Q	42·79
26	L	(45·19)
Oct. 4	Q	41·75
14	Q	41·16

α Cephei.

	Obsr.	° ′
		27. 59
		″
Apr. 17	L	21·64
Aug. 31	L	(26·55)
Sept. 19	Q	23·60
27	Q	24·63
Oct. 5	Q	24·22
7	Q	23·84
28	L	24·93
Reflexion.		
Aug. 31	L	(20·14)
Sept. 19	Q	21·66
27	Q	23·18
Oct. 5	Q	25·62
7	Q	22·05
28	L	21·61

α Cephei, S.P.

	Obsr.	° ′
		−27. 59
		″
Feb. 17	L	22·94
Mar. 4	L	24·15
16	L	21·53
24	Q	24·18
30	L	24·37
Apr. 2	Q	21·17
12	Q	24·22

18 Aquarii.

	Obsr.	° ′
		103. 27
		″
Sept. 28	L	36·26

20 Aquarii.

	Obsr.	° ′ 93. 58 ″
Aug. 29	L	48·97

B.A.C. 7463.

		109. 44 ″
Sept. 29	Q	23·05

B.A.C. 7473.

		109. 50 ″
Aug. 31	L	2·10

β Aquarii.

		96. 10 ″
Aug. 18	Q	5·51
Sept. 13	Q	5·83
24	Q	3·12

B.A.C. 7479.

		115. 11 ″
Aug. 26	Q	20·04
29	L	23·49

Groombridge 3548.

		3. 31 ″
Sept. 21	Q	56·63
Oct. 3	Q	55·80
28	L	57·16
Nov. 3	L	56·01

Groombridge 3548, S.P.

		−3. 31 ″
Mar. 23	L	54·57
Apr. 1	L	55·16
13	L	53·38

β Cephei.

		20. 2 ″
Apr. 17	L	8·23
Sept. 28	L	9·17
30	L	10·93

β Cephei. (*concluded.*)

	Obsr.	° ′ 20. 2 ″
Oct. 7	Q	8·26
24	L	9·41
31	L	9·39
Reflexion.		
Sept. 28	L	8·44
30	L	8·23
Oct. 24	L	10·55
31	L	8·99

β Cephei, S.P.

		−20. 2 ″
Feb. 17	L	9·28
Mar. 4	L	7·20
11	L	9·41
16	L	9·26
24	Q	10·31
30	L	9·08
Apr. 12	Q	10·43

B.A.C. 7507.

		109. 2 ″
Oct. 5	Q	43·90

ξ Aquarii.

		98. 27 ″
Aug. 31	L	47·87
Sept. 24	Q	44·98
Oct. 4	Q	45·97
6	Q	44·53
Nov. 7	L	46·00

B.A.C. 7528.

		70. 20 ″
Aug. 26	Q	48·58
Sept. 19	Q	47·38
Reflexion.		
Sept. 19	Q	47·73

26 Aquarii.

		89. 19 ″
Sept. 28	L	57·54

B.A.C. 7550.

	Obsr.	° ′ 110. 14 ″
Aug. 29	L	25·55
Sept. 29	Q	23·84

B.A.C. 7558.

		106. 35 ″
Oct. 5	Q	29·82

ε Pegasi.

		80. 44 ″
Mar. 11	L	50·00
Sept. 23	Q	51·03
27	Q	51·70
Nov. 3	L	47·70
5	L	48·69
Reflexion.		
Sept. 27	Q	49·46
Nov. 3	L	45·49
5	L	(40·20)

c^1 Capricorni.

		99. 42 ″
Aug. 31	L	22·52

c^2 Capricorni.

		99. 54 ″
Sept. 26	L	8·48

δ Capricorni.

		106. 44 ″
Sept. 24	Q	35·59
Oct. 31	L	34·22

11 Cephei.

		19. 18 ″
Sept. 5	Q	50·08
Reflexion.		
Sept. 5	Q	51·73

B.A.C. 7599.

	Obsr.	° ′ 103. 21 ″
Oct. 24	L	19·25

13 Pegasi.

		73. 20 ″
Sept. 19	Q	42·90

B.A.C. 7616.

		94. 37 ″
Sept. 26	L	50·48

B.A.C. 7617.

		101. 11 ″
Aug. 29	L	58·60

B.A.C. 7620.

		100. 57 ″
Aug. 24	Q	2·45
31	L	5·06

16 Pegasi.

		64. 42 ″
Sept. 12	Q	49·11
23	Q	48·45
24	Q	47·84
28	L	50·02
29	Q	48·37
Oct. 5	Q	51·21
7	Q	48·33
31	L	46·11
Nov. 3	L	50·47
Reflexion.		
Oct. 5	Q	49·23
7	Q	47·84

B.A.C. 7629.

		83. 46 ″
Sept. 30	L	31·02

17 Pegasi.

	Obsr.	° ′
		78. 34
		″
Oct. 4	Q	4·76
24	L	5·04

B.A.C. 7649.

		111. 49
Aug. 26	Q	49·06
Sept. 19	Q	47·00

18 Pegasi.

		83. 55
Nov. 3	L	60·43
4	L	59·53

O. A. (N.Z.) 23169.

		37. 47
Sept. 27	Q	43·49

28 Aquarii.

		90. 2
Sept. 26	L	52·09

19 Pegasi.

		82. 23
Oct. 31	L	41·71

B.A.C. 7675.

		117. 28
Aug. 31	L	47·33

α Aquarii.

		90. 58
Aug. 24	Q	46·39
Sept. 12	Q	45·27
13	Q	45·32
14	Q	45·15
24	Q	46·30
29	Q	44·44

ξ² Cephei.

	Obsr.	° ′
		26. 2
		″
Oct. 31	L	2·86
Nov. 3	L	2·83

ξ² Cephei, S.P.

		−26. 2
Mar. 23	L	3·05
Apr. 13	L	3·14

B.A.C. 7697.

		101. 6
Nov. 4	L	36·16

ι Pegasi.

		65. 19
Sept. 5	Q	4·92
26	L	6·14
Oct. 5	Q	5·34
Dec. 5	Q	4·59
Reflexion.		
Sept. 5	Q	2·36

25 Pegasi.

		68. 57
Nov. 16	Q	27·27

B.A.C. 7739.

		117. 45
Aug. 29	L	17·39

39 Aquarii.

		104. 51
Nov. 10	Q	45·78

B.A.C. 7742.

		74. 37
Nov. 4	L	40·75

B.A.C. 7752.

		95. 7
Oct. 3	Q	24·61

B.A.C. 7757.

	Obsr.	° ′
		62. 3
		″
Oct. 28	L	51·51
Reflexion.		
Oct. 28	L	49·77

B.A.C. 7762.

		96. 15
Sept. 26	L	36·02

θ Aquarii.

		98. 27
Aug. 26	Q	35·52
Sept. 12	Q	34·70
13	Q	34·14
14	Q	34·90
19	Q	33·33
27	Q	34·77
Nov. 4	L	36·33
8	L	34·76
Dec. 5	Q	32·81

B.A.C. 7793.

		96. 55
Aug. 29	L	38·50
Sept. 26	L	37·01

γ Aquarii.

		92. 4
Oct. 1	Q	17·15
3	Q	17·10
Nov. 3	L	16·97
4	L	18·46
5	L	19·06
8	L	18·45
10	Q	18·68
16	Q	17·40
Dec. 5	Q	18·78

B.A.C. 7804.

		97. 52
Sept. 13	Q	52·90
28	L	55·65

B.A.C. 7809.

	Obsr.	° ′
		91. 52
		″
Oct. 31	L	34·09

B.A.C. 7817.

		114. 22
Sept. 5	Q	19·45
19	Q	22·70

54 Aquarii.

		101. 55
Sept. 27	Q	6·04
Nov. 14	Q	7·65

56 Aquarii.

		105. 16
Nov. 3	L	49·33

ζ Piscis Australis.

		116. 46
Sept. 29	Q	0·40

σ Aquarii.

		101. 22
Aug. 29	L	25·64
31	L	25·86
Sept. 13	Q	23·24
14	Q	22·04
26	L	25·13
30	L	24·78
Nov. 10	Q	24·24
16	Q	22·99

Groombridge 3820.

		4. 34
Oct. 7	Q	(36·49)
24	L	43·96
Nov. 4	L	43·03
5	L	43·37
8	L	43·35

Groombridge 3820, S.P.

	Obs^r.	° ′ ″
		−4. 34
Mar. 11	L	43·67
18	L	41·25
Apr. 14	Q	41·05
18	L	40·46

B.A.C. 7861.

		100. 18
Oct. 3	Q	31·92

η Aquarii.

		90. 49
Sept. 5	Q	4·23
Oct. 1	Q	2·71

61 Aquarii.

		108. 9
Sept. 19	Q	38·22

Radcliffe 5760, S.P.

		−5. 37
Apr. 2	Q	56·81

Radcliffe 5776.

		2. 36
Oct. 31	L	40·45

κ Aquarii.

		94. 55
Nov. 18	Q	42·89

40 Pegasi.

		71. 10
Sept. 30	L	48·67

B.A.C. 7899.

		97. 14
Sept. 29	Q	28·61

41 Pegasi.

	Obs^r.	° ′ ″
		71. 1
Oct. 5	Q	34·01
28	L	31·42

ζ Pegasi.

		79. 52
Oct. 7	Q	38·79
Nov. 14	Q	40·72
16	Q	39·29

B.A.C. 7912.

		76. 11
Nov. 4	L	33·75
Reflexion.		
Nov. 4	L	30·54

B.A.C. 7920.

		97. 55
Sept. 5	Q	37·33
Nov. 3	L	36·58

g^1 Aquarii.

		109. 32
Dec. 5	Q	28·75

20 Piscis Australis.

		115. 57
Nov. 18	Q	3·91

B.A.C. 7935.

		100. 21
Sept. 27	Q	28·73
28	L	(33·20)
Oct. 1	Q	29·29
3	Q	28·93

τ^1 Aquarii.

		104. 46
Sept. 19	Q	20·97

μ Pegasi.

	Obs^r.	° ′ ″
		66. 6
Oct. 7	Q	55·45

B.A.C. 7964.

		76. 45
Sept. 30	L	29·63
Dec. 5	Q	30·01

ι Cephei.

		24. 30
Nov. 3	L	51·94
4	L	51·58
10	Q	54·93
Reflexion.		
Nov. 3	L	50·76
4	L	52·84
10	Q	52·32

λ Aquarii.

		98. 18
Oct. 3	Q	9·30
5	Q	9·67
Nov. 14	Q	10·30
16	Q	10·37
18	Q	8·49

B.A.C. 7977.

		88. 52
Sept. 27	Q	42·38
28	L	46·66
Oct. 28	L	46·81

75 Aquarii.

		102. 54
Sept. 19	Q	42·51

Fomalhaut.

		120. 20
Oct. 1	Q	32·85

B.A.C. 7993.

	Obs^r.	° ′ ″
		95. 32
Dec. 5	Q	9·73

B.A.C. 8001.

		81. 21
Sept. 5	Q	54·95

52 Pegasi.

		78. 59
Sept. 29	Q	51·47

B.A.C. 8007.

		115. 53
Nov. 14	Q	23·49

B.A.C. 8017.

		95. 26
Oct. 7	Q	30·17

B.A.C. 8019.

		87. 11
Sept. 26	L	50·35
28	L	52·48
Nov. 16	Q	48·61

82 Aquarii.

		97. 18
Nov. 18	Q	12·62

β Piscium.

		86. 54
Dec. 5	Q	40·07
6	Q	40·64

α Pegasi.

		75. 31
Sept. 27	Q	33·35
Nov. 22	Q	32·81

c¹ Aquarii.

	Obs.	° ′ 114. 28 ″
Oct. 1	Q	38·93

A Piscium.

		88. 36 ″
Nov. 26	Q	43·17

B.A.C. 8065.

		88. 35 ″
Oct. 31	L	34·67

57 Pegasi.

		82. 3 ″
Oct. 7	Q	32·06
Nov. 18	Q	31·73
24	Q	33·84

58 Pegasi.

		80. 54 ″
Nov. 5	L	52·53

W.B. (2) xxiii. 61.

		60. 41 ″
Oct. 28	L	42·90

*** R.A. $23^h\ 5^m\ 10^s$.**

		62. 46 ″
Nov. 14	Q	44·02

B.A.C. 8091.

		62. 40 ″
Sept. 19	Q	8·22

61 Pegasi.

		62. 29 ″
Oct. 3	Q	35·21
31	L	35·16
Reflexion.		
Nov. 10	Q	32·60

B.A.C. 8099.

	Obs.	° ′ 62. 30 ″
Nov. 22	Q	48·93

γ Piscium.

		87. 27 ″
Sept. 14	Q	36·69
29	Q	38·24
Nov. 5	L	38·63
18	Q	36·45
24	Q	37·25
26	Q	37·65
Dec. 5	Q	37·59
6	Q	36·72

B.A.C. 8129.

		96. 39 ″
Nov. 8	L	0·82

66 Pegasi.

		78. 25 ″
Sept. 26	L	51·69

B.A.C. 8152.

		90. 27 ″
Nov. 14	Q	19·57
26	Q	19·09

B.A.C. 8155.

		112. 31 ″
Nov. 22	Q	3·37

B.A.C. 8167.

		112. 29 ″
Sept. 27	Q	18·87

κ Piscium.

		89. 29 ″
Sept. 14	Q	18·76
Oct. 3	Q	18·16
31	L	18·81
Nov. 8	L	18·87
18	Q	17·37
24	Q	17·50

69 Pegasi.

	Obs.	° ′ 65. 34 ″
Sept. 19	Q	44·71
Oct. 24	L	45·28
Nov. 10	Q	46·00
16	Q	45·85
Reflexion.		
Nov. 10	Q	44·86

B.A.C. 8175.

		102. 11 ″
Oct. 7	Q	51·23
Nov. 3	L	51·40

12 Piscium.

		91. 47 ″
Sept. 26	L	2·73

Radcliffe 6099.

		4. 19 ″
Sept. 29	Q	51·36
Oct. 1	Q	49·03
5	Q	52·47

Radcliffe 6099, S.P.

		−4. 19 ″
Apr. 29	L	53·12

b³ Aquarii.

		112. 7 ″
Nov. 5	L	11·57

B.A.C. 8199.

		102. 17 ″
Nov. 26	Q	40·57

72 Pegasi.

		59. 25 ″
Sept. 28	L	31·87

Radcliffe 6117, S.P.

		−4. 11 ″
Apr. 12	Q	31·33

Groombridge 4101, S.P.

	Obs.	° ′ −3. 26 ″
Apr. 20	L	35·56
21	Q	32·79
23	Q	31·53
25	L	34·35
Reflexion.		
Apr. 21	Q	31·94

15 Piscium.

		89. 26 ″
Sept. 27	Q	14·36
Nov. 3	L	17·35
4	L	15·99

B.A.C. 8216.

		117. 37 ″
Oct. 7	Q	43·36
Nov. 22	Q	42·38

ι Piscium.

		85. 6 ″
Nov. 24	Q	39·06
26	Q	38·60
Dec. 6	Q	38·82

B.A.C. 8234.

		81. 4 ″
Sept. 26	L	32·56
Oct. 3	Q	32·07

γ Cephei.

		13. 7 ″
Nov. 5	L	36·72
8	L	37·61
14	Q	36·32
16	Q	35·47
Reflexion.		
Nov. 5	L	37·12
8	L	35·25
14	Q	36·79
16	Q	39·81

γ Cephei, S.P.

	Obsʳ.	° ′
		−13. 7
May 7	Q	″ 36·07

B.A.C. 8247.

		72. 5
Sept. 28	L	″ 14·07
30	L	15·50

76 Pegasi.

		74. 25
Oct. 5	Q	″ 5·49
Nov. 4	L	9·06

77 Pegasi.

		80. 25
Sept. 27	Q	″ 24·04
Oct. 31	L	23·34

B.A.C. 8257.

		83. 33
Sept. 29	Q	″ 44·91

Radcliffe 6172.

		5. 17
Nov. 10	Q	″ 9·44

B.A.C. 8266.

		102. 39
Oct. 7	Q	″ 47·26
24	L	49·30

B.A.C. 8272.

	Obsʳ.	° ′
		82. 30
Oct. 3	Q	″ 31·53

δ Sculptoris.

		118. 52
Nov. 22	Q	″ 57·19
24	Q	57·00
26	Q	57·15
Dec. 6	Q	56·59

21 Piscium.

		89. 40
Nov. 5	L	″ 46·09

108 Aquarii.

		109. 39
Oct. 31	L	″ 56·66

80 Pegasi.

		81. 26
Sept. 24	M	″ 25·23
28	L	28·58

B.A.C. 8297.

		105. 0
Nov. 18	Q	″ 28·25

82 Pegasi.

		79. 48
Nov. 8	L	″ 34·16

B.A.C. 8304.

	Obsʳ.	° ′
		114. 59
Sept. 27	Q	″ 7·10

B.A.C. 8308.
(2nd star.)

		117. 47
Nov. 5	L	″ 59·36

ψ Pegasi.

		65. 36
Oct. 7	Q	″ 50·38

ω Piscium.

		83. 53
Sept. 26	L	″ 21·19
28	L	24·27
Oct. 1	Q	22·63
31	L	22·44
Nov. 3	L	22·91
4	L	23·61
10	Q	23·93
22	Q	20·90
Dec. 6	Q	22·33

B.A.C. 8332.

		120. 14
Nov. 26	Q	″ 29·07

B.A.C. 8335.

		79. 29
Nov. 24	Q	″ 1·85

B.A.C. 8337.

	Obsʳ.	° ′
		63. 50
Sept. 27	Q	″ 14·93
Oct. 24	L	13·66

c^2 Piscium.

		82. 16
Sept. 24	M	″ 11·32
Nov. 5	L	10·62

2 Ceti.

		108. 5
Nov. 17	Q	″ 34·38
18	Q	37·41

B.A.C. 8360.

		107. 17
Sept. 30	L	″ 6·28
Oct. 31	L	2·69

B.A.C. 8365.

		91. 15
Sept. 26	L	″ 31·58
Oct. 5	Q	29·73

86 Pegasi.

		77. 21
Nov. 8	L	″ 38·81
Reflexion.		
Nov. 8	L	37·78

Star omitted in its proper place, after B.A.C. 3726.

45 Leonis Minoris.

	Obsʳ.	° ′
		61. 24
Apr. 21	Q	″ 51·24

Jan. 6. η Tauri (R and D)—Unsteady.
Groombridge 750 (R)—Faint.
8. Groombridge 595 (R and D)—Faint and unsteady.
16. Radcliffe 3523, S.P.—The micrometer-reading increased by 1^r.
21. Radcliffe 3523, S.P.—The micrometer-reading decreased by 1^r.
30. B.A.C. 1206—The micrometer-reading increased by 1^r.
Radcliffe 1928 (R)—Very faint.

Feb. 3. d^1 Cancri—The micrometer-reading set down $20^r{\cdot}420$ instead of $20^r{\cdot}120$.
B.A.C. 2888—The micrometer-reading set down $20^r{\cdot}385$ instead of $20^r{\cdot}585$.
9. v^2 Tauri—The circle-reading has been increased by 1′.
B.A.C. 2677 (R)—Faint and unsteady.
18. B.A.C. 1893—The micrometer-reading set down $18^r{\cdot}332$ instead of $18^r{\cdot}832$.
γ Draconis, S.P.—The circle-reading has been increased by 1′.

Mar. 4. Groombridge 1359 (R and D)—Faint.
12. Radcliffe 2404 (R and D)—Unsteady.
18. μ Leonis (D)—Very hazy.
Groombridge 1620 (D)—Hazy.
29. B.A.C. 3904 (R)—Ill-defined.
β Leonis (R)—Very unsteady.

Apr. 18. η Boötis (R)—Unsteady.
3 Ursæ Minoris (R)—Faint.
22. Regulus (R)—Very unsteady.
B.A.C. 4192—The circle-reading has been increased by 2′.
23. Groombridge 1852 (R)—Very unsteady.
Groombridge 1923—The circle-reading set down 1′ too great.
η Boötis (R)—Very unsteady.

May 7. B.A.C. 4527 (R)—Very unsteady.
13. Venus, S.C.—Indistinct.
26. Venus, N.L.—An exceedingly doubtful observation.
27. η Boötis (R)—Very unsteady.

June 3. Venus, N.L.—Ill-defined.
7. B.A.C. 4798—The circle-reading has been diminished by 1′.
α Coronæ (R)—Very unsteady.
8. Radcliffe 1272, S.P.—The circle-reading has been increased by 1′.
13. Groombridge 2210—The micrometer-reading has been increased by 1^r.
15. ζ Herculis (R)—Very unsteady.
21. α Libræ—The micrometer-reading has been increased by 1^r.

Aug. 29. B.A.C. 7793—The circle-reading has been increased by 5′.

Sept. 5. 11 Cephei (R)—Ill-defined.
ι Pegasi (R)—Very unsteady.
19. λ Ursæ Minoris—The micrometer-reading has been diminished by 1^r.
24. B.A.C. 6854.—The circle-reading has been diminished by 1′.
28. Cephei 51, S.P.—Microscope (b) has been increased 20″.
30. γ Ursæ Majoris, S.P.—Hazy and unsteady.

Oct. 14. μ Andromedæ—The micrometer-reading has been diminished by 1^r.
31. 41 Ceti, 105 Piscium —The circle-reading has been increased by 1′.

Nov. 3. ϵ Pegasi (R)—Unsteady.
5. B.A.C. 8308 (2)—The companion precedes by $0^s{\cdot}8$. The declination-wire bisects both stars at the same time.
14. ι Ceti—The micrometer-reading has been increased by 1^r.
24. γ Piscium—The circle-reading has been diminished by 1′.

Dec. 1. η Piscium (R)—Unsteady.
6. 11 Arietis—The circle-reading has been increased by 15′.

RADCLIFFE OBSERVATORY,

OXFORD.

CATALOGUE

OF

CONCLUDED MEAN RIGHT ASCENSIONS

AND

MEAN NORTH POLAR DISTANCES,

FOR 1864, JANUARY 1,

OF STARS OBSERVED IN THE YEAR 1864;

WITH THE

ANNUAL PRECESSIONS:

(THE NORTH POLAR DISTANCES BEING CORRECTED FOR FLEXURE OF THE TELESCOPE OF THE TRANSIT CIRCLE, AND FOR ERROR OF COLATITUDE.)

No.	Name of Star.	Mag.	Number of Obs. of R.A.	Fraction of the Year for Mean.	Mean R.A. 1864, Jan. 1.	Precession in R.A.	Number of Obs. of N.P.D.	Fraction of the Year for Mean.	Mean N.P.D. 1864, Jan. 1.	Precession in N.P.D.
					h. m. s.	s.			° ′ ″	″
1	5 Ceti	7.0	1	0.77	0 1 14.11	+3.070	1	0.77	93 12 16.97	−20.06
2	α Andromedæ	...	3	.59	0 1 21.71	3.085*	3	.74	61 39 37.00	19.90*
3	B.A.C. 5	8.0	1	.74	0 1 44.91	3.070	2	.78	92 58 45.60	20.06
4	B.A.C. 12	7.0	1	.86	0 2 57.35	3.070	1	.86	93 19 4.61	20.05
5	B.A.C. 17	6.5	1	.90	0 3 21.16	3.069	1	.90	96 0 16.59	20.05
6	γ Pegasi	...	2	.77	0 6 14.00	3.081*	2	.77	75 34 20.16	20.03*
7	χ Pegasi	...	1	.81	0 7 34.46	3.086	1	.81	70 32 59.98	20.05
8	B.A.C. 35	6.5	2	.81	0 7 57.92	3.062	2	.81	100 19 32.71	20.05
9	B.A.C. 42	7.5	2	.74	0 8 58.61	3.074	2	.74	86 30 18.50	20.04
10	B.A.C. 43	...	1	.85	0 9 15.86	3.036	1	.85	122 12 4.87	20.04
11	36 Piscium	...	1	.84	0 9 34.65	3.078	1	.84	82 30 56.91	20.04
12	ι Ceti	...	9	.74	0 12 29.81	3.058	8	.74	99 34 41.56	20.03
13	*d* Piscium	...	1	.86	0 13 36.03	3.081	1	.86	82 33 53.96	20.02
14	43 Piscium	...	2	.74	0 17 35.89	3.095	2	.74	76 26 17.34	20.00
15	B.A.C. 91	7.0	2	.81	0 18 59.49	3.110	2	.81	70 36 24.51	19.99
16	46 Piscium	7.5	1	.76	0 20 53.87	3.112	1	.76	71 14 16.53	19.97
17	B.A.C. 107	7.5	1	.86	0 22 32.40	3.061	1	.86	94 13 19.80	19.96
18	12 Ceti	...	6	.61	0 23 5.90	3.059*	5	.54	94 42 32.99	19.94*
19	B.A.C. 113	7.0	2	.84	0 23 9.66	3.080	2	.84	85 53 33.68	19.95
20	Groombr. 67	8.0	...	...	0 23 11	......	5	.66	4 25 57.52	19.95
21	49 Piscium	7.0	2	.79	0 23 43.61	3.108	2	.79	74 42 51.92	19.94
22	51 Piscium	6.3	1	.85	0 25 22.87	3.087	1	.85	83 47 47.77	19.93
23	B.A.C. 135	...	2	.82	0 26 57.15	2.979	2	.82	120 18 28.01	19.91
24	B.A.C. 142	7.0	2	.80	0 27 52.29	3.107	2	.80	77 22 35.67	19.91
25	ε Andromedæ	...	4	.90	0 31 22.46	3.170	3	.82	61 25 37.24	19.87
26	α Cassiopeiæ	...	...	...	0 32 49	......	2	.74	34 12 32.27	19.81*
27	B.A.C. 182	...	1	.88	0 34 43.30	3.393	1	.88	31 59 33.47	19.83
28	B.A.C. 190	7.3	2	.82	0 35 54.25	2.991	3	.82	110 56 22.26	19.81
29	β Ceti	...	3	.56	0 36 45.53	3.012*	4	.64	108 44 0.74	19.82*
30	δ Piscium	...	1	.94	0 41 37.61	3.100	1	.94	83 9 20.09	19.73
31	i^1 Piscium	7.5	1	.91	0 42 35.09	3.197	2	.91	63 1 49.30	19.71
32	B.A.C. 237	7.0	2	.39	0 44 18.15	3.083	2	.39	87 21 12.77	19.68
33	B.A.C. 243	7.5	2	.86	0 46 19.59	3.087	2	.86	86 39 8.00	19.65
34	Groombr. 144	...	...	...	0 47 16	......	1	.91	1 42 27.10	19.63
35	B.A.C. 252	7.2	2	.85	0 48 16.72	+3.101	2	.85	83 53 3.62	−19.62

No.	Name of Star.	Mag.	Number of Obs. of R.A.	Fraction of the Year for Mean.	Mean R.A. 1864, Jan. 1.	Precession in R.A.	Number of Obs. of N.P.D.	Fraction of the Year for Mean.	Mean N.P.D. 1864, Jan. 1.	Precession in N.P.D.
					h. m. s.	s.			° ′ ″	″
36	*k* Piscium	6·3	2	0·88	0 48 39·86	+3·211	2	0·88	63 31 43·52	−19·61
37	μ Andromedæ .	...	3	·81	0 49 12·68	3·291	5	·84	52 14 20·40	19·60
38	2 Ursæ Min....	...	...	...	0 50 44	......	1	·92	4 28 27·65	19·57
39	B.A.C. 269 ...	...	1	·81	0 50 46·87	3·138	1	·81	77 2 21·09	19·57
40	ϕ^4 Ceti	6·5	1	·76	0 51 55·00	3·007	1	·76	102 6 53·07	19·55
41	B.A.C. 274 ...	6·5	1	·89	0 52 46·69	3·102	1	·89	84 15 6·08	19·53
42	ε Piscium	...	5	·86	0 55 53·13	3·110*	4	·87	82 50 34·05	19·46*
43	B.A.C. 299 ...	7·0	2	·91	0 57 2·15	3·253	2	·91	61 4 4·04	19·44
44	73 Piscium ...	...	2	·39	0 57 50·04	3·100	2	·39	85 4 24·12	19·42
45	72 Piscium ...	7·0	2	·01	0 57 54·85	3·155	2	·01	75 47 11·05	19·42
46	B.A.C. 308 ...	...	1	·81	0 58 24·15	3·198	1	·81	69 15 20·28	19·41
47	27 Ceti	...	1	·87	0 58 48·08	3·007	1	·87	100 42 28·92	19·40
48	75 Piscium ...	...	1	·84	0 59 24·56	3·145	1	·84	77 46 23·91	19·39
49	B.A.C. 325 ...	...	1	·85	1 1 15·46	3·128	1	·85	80 49 8·66	19·34
50	β Andromedæ .	...	2	·90	1 2 7·56	3·321	1	·93	55 6 4·01	19·32
51	ψ^3 Piscium ...	...	1	·83	1 2 33·26	3·194	1	·83	71 4 3·82	19·31
52	τ Piscium	6·0	3	·31	1 4 10·57	3·279	3	·31	60 37 58·83	19·27
53	ζ Piscium	...	1	·86	1 6 37·68	3·117	1	·86	83 8 40·99	19·21
54	87 Piscium ...	6·0	2	·85	1 6 54·37	3·177	2	·85	74 35 14·42	19·21
55	B.A.C. 371 ...	...	1	·01	1 7 5·89	3·014	1	·01	98 20 35·08	19·20
56	88 Piscium ...	6·3	1	·85	1 7 38·29	3·113	1	·85	83 43 29·87	19·19
57	B.A.C. 375 ...	...	1	·91	1 8 11·33	2·954	1	·91	106 32 18·23	19·17
58	α^1 Ursæ Min....	...	1	·31	1 8 55·13	19·039	1	·31	1 25 10·84	19·16
59	Polaris	...	18	·29	1 9 19·31	19·364*	46	·53	1 24 56·78	19·14*
60	41 Ceti	...	2	·42	1 10 52·43	3·011	2	·42	98 22 40·37	19·10
61	*l* Piscium	6·4	2	·44	1 13 36·54	3·295	2	·44	61 58 24·20	19·03
62	43 Ceti	...	1	·89	1 15 37·57	3·061	1	·89	91 9 44·00	18·97
63	B.A.C. 408 ...	7·3	2	·43	1 15 41·30	3·101	2	·43	85 58 24·96	18·97
64	92 Piscium ...	7·0	1	·85	1 16 32·79	3·206	1	·85	72 53 29·50	18·95
65	θ Ceti	...	2	·44	1 17 13·56	2·996*	2	·44	98 53 10·78	18·71*
66	ρ Piscium	5·3	1	·00	1 18 55·62	3·221	1	·00	71 32 11·28	18·88
67	B.A.C. 430 ...	7·2	2	·43	1 19 2·27	3·229	2	·43	70 38 11·07	18·88
68	47 Ceti	...	2	·88	1 20 8·94	2·959	2	·88	103 45 54·88	18·84
69	B.A.C. 440 ...	7·0	1	·01	1 21 15·39	3·130	1	·01	82 44 38·95	18·81
70	η Piscium	...	5	·54	1 24 12·48	+3·198*	5	·74	75 21 22·18	−18·71*

No.	Name of Star.	Mag.	Number of Obs. of R.A.	Fraction of the Year for Mean.	Mean R.A. 1864, Jan. 1.	Pre-cession in R.A.	Number of Obs. of N.P.D.	Fraction of the Year for Mean.	Mean N.P.D. 1864, Jan. 1.	Pre-cession in N.P.D.
					h. m. s.	s.			° ′ ″	″
71	B.A.C. 464 ...	7·3	3	0·57	1 26 10·77	+3·135	3	0·57	82 29 23·72	−18·65
72	100 Piscium (1)	...	1	·89	1 27 38·27	3·176	1	·89	78 8 18·56	18·60
73	B.A.C. 471 ...	7·3	2	·00	1 27 44·84	3·137	2	·00	82 25 21·18	18·60
74	49 Ceti	...	1	·88	1 27 59·09	2·924	1	·88	106 22 25·54	18·59
75	B.A.C. 479 ...	...	1	·85	1 28 38·52	2·749	1	·85	122 35 19·44	18·57
76	50 Ceti	6·0	1	·93	1 29 20·89	2·923	1	·93	106 5 48·53	18·55
77	105 Piscium ...	6·0	2	·84	1 32 20·77	3·218	2	·84	74 17 7·86	18·45
78	B.A.C. 517 ...	7·5	1	·90	1 34 15·65	3·149	1	·90	81 37 0·58	18·38
79	ν Piscium	6·0	4	·65	1 34 21·34	3·113*	5	·52	85 12 7·94	18·34*
80	B.A.C. 524 ...	8·0	1	·00	1 35 7·94	3·216	1	·00	74 54 31·59	18·35
81	109 Piscium ...	...	1	·88	1 37 30·42	3·265	1	·88	70 35 48·97	18·27
82	4 Arietis	...	2	·85	1 40 48·70	3·237	2	·85	73 43 23·13	18·14
83	B.A.C. 549 ...	7·5	1	·90	1 40 58·84	3·238	1	·90	73 39 31·17	18·14
84	1 Arietis (north)	...	1	·87	1 42 37·94	3·300	1	·87	68 24 5·97	18·08
85	ε Cassiopeiæ ...	...	...	...	1 44 38	......	2	·95	27 0 4·26	18·01
86	B.A.C. 576 ...	...	1	·91	1 46 55·96	3·515	1	·91	53 32 29·43	17·91
87	β Arietis	...	4	·45	1 47 7·93	3·295*	10	·55	69 51 28·49	17·79*
88	56 Ceti	5·0	1	·86	1 50 18·02	2·805	1	·86	113 11 33·36	17·78
89	λ^1 Arietis	...	2	·90	1 50 21·29	3·333	2	·90	67 4 7·35	17·77
90	B.A.C. 609 ...	...	1	·87	1 52 9·15	3·200	1	·87	78 22 0·25	17·70
91	ε Trianguli ...	6·5	1	·00	1 55 1·53	3·483	1	·00	57 22 21·66	17·58
92	Radcliffe 559...	...	...	...	1 55 14	......	2	·19	1 28 11·98	17·58
93	60 Ceti	...	1	·91	1 56 13·38	3·065	1	·91	90 31 44·12	17·53
94	61 Ceti	7·0	2	·90	1 56 50·57	3·060	2	·90	90 59 39·10	17·51
95	B.A.C. 645 ...	...	1	·87	1 59 0·33	3·383	1	·87	64 49 12·19	17·41
96	11 Arietis	6·7	1	·90	1 59 6·50	3·381	1	·90	64 56 40·93	17·40
97	α Arietis	...	4	·88	1 59 30·68	3·365*	6	·90	67 10 56·28	17·24*
98	14 Arietis	...	1	·89	2 1 41·22	3·391	1	·89	64 42 18·64	17·30
99	15 Arietis	...	1	·96	2 3 5·55	3·304	1	·96	71 9 33·63	17·23
100	19 Arietis	6·5	1	·86	2 5 39·49	3·253	1	·86	75 21 32·53	17·12
101	7 Trianguli ...	6·3	1	·90	2 7 54·67	3·524	1	·90	57 16 28·62	17·01
102	21 Arietis	...	1	·87	2 8 0·17	3·392	1	·87	65 35 21·10	17·01
103	67 Ceti	6·5	6	·30	2 10 12·21	2·986*	7	·26	97 3 1·39	16·77*
104	10 Trianguli ...	...	1	·91	2 11 4·48	3·455	1	·91	61 59 12·03	16·86
105	23 Arietis	...	1	·91	2 11 35·40	+3·321	1	·91	70 56 11·33	−16·84

No.	Name of Star.	Mag.	Number of Obs. of R.A.	Fraction of the Year for Mean.	Mean R.A. 1864, Jan. 1.	Pre-cession in R.A.	Number of Obs. of N.P.D.	Fraction of the Year for Mean.	Mean N.P.D. 1864, Jan. 1.	Pre-cession in N.P.D.
					h. m. s.	s.			° ′ ″	″
106	B.A.C. 722 ...	7.0	1	0.86	2 12 50.94	+3.006	1	0.86	94 58 23.19	−16.78
107	B.A.C. 738 ...	7.7	2	.90	2 16 53.70	3.198	2	.90	80 20 46.68	16.58
108	W.B. (2) ii. 412	...	1	.95	2 18 14.30	3.497	1	.95	60 41 10.29	16.52
109	ξ^2 Ceti	...	4	.66	2 20 55.78	3.180*	4	.66	82 9 3.63	16.36*
110	B.A.C. 764 ...	...	1	.89	2 22 19.70	3.193	1	.89	81 2 36.81	16.31
111	Radcliffe 713...	...	2	.00	2 22 28.58	15.627	4	.23	3 32 55.82	16.30
112	26 Arietis	...	2	.44	2 23 1.13	3.343	2	.44	70 44 59.66	16.27
113	B.A.C. 774 ...	...	1	.93	2 24 7.52	2.691	1	.93	115 47 41.14	16.22
114	B.A.C. 790 ...	...	1	.95	2 27 53.37	2.628	1	.95	118 49 53.23	16.02
115	B.A.C. 803 ...	...	1	.92	2 30 17.71	2.588	1	.92	120 38 22.59	15.90
116	81 Ceti	7.0	2	.01	2 30 50.97	3.014	2	.01	93 59 12.53	15.86
117	δ Ceti	...	6	.62	2 32 30.80	3.067	5	.55	90 15 36.26	15.78
118	Rad. 745, S.P.	...	...	...	2 34 31	......	1	.43	2 0 32.57	15.67
119	B.A.C. 834 ...	6.7	1	.90	2 35 58.04	3.464	1	.90	64 56 31.03	15.59
120	γ Ceti	...	3	.57	2 36 15.38	3.101*	2	.44	87 20 20.94	15.39*
121	o Arietis.........	...	1	.00	2 37 3.65	3.293	1	.00	75 15 57.31	15.53
122	B.A.C. 855 ...	...	1	.92	2 38 38.39	2.515	1	.92	123 5 54.74	15.44
123	B.A.C. 866 ...	7.0	1	.93	2 40 51.58	3.466	1	.93	65 22 58.53	15.32
124	π Arietis	...	3	.62	2 41 42.46	3.334	3	.62	73 6 11.10	15.27
125	σ Arietis	6.0	3	.32	2 43 59.26	3.298	3	.32	75 28 48.49	15.14
126	B.A.C. 891 (1)	...	1	.00	2 45 28.20	3.162	1	.00	84 5 4.80	15.05
127	B.A.C. 891 (2)	...	1	.00	2 45 28.29	3.162	1	.00	84 5 5.57	15.05
128	ρ^1 Arietis	...	1	.91	2 47 18.19	3.346	1	.91	72 49 12.53	14.95
129	ρ^2 Arietis	...	1	.96	2 48 10.25	3.358	1	.96	72 13 16.60	14.89
130	ε Arietis	...	1	.04	2 51 26.49	3.416	1	.04	69 12 19.26	14.70
131	50 Arietis	6.5	1	.92	2 52 53.35	3.359	1	.92	72 32 14.08	14.61
132	α Ceti	...	4	.48	2 55 10.30	3.127*	4	.48	86 26 45.85	14.36*
133	52 Arietis	...	1	.95	2 57 28.48	3.501	1	.95	65 16 33.56	14.34
134	Groombr. 595 .	...	...	...	3 0 42	......	5	.17	5 34 49.95	14.14
135	55 Arietis	...	1	.89	3 1 26.31	3.588	1	.89	61 26 40.92	14.09
136	B.A.C. 980 ...	...	1	.90	3 2 22.74	3.544	1	.90	63 37 34.47	14.04
137	δ Arietis	...	5	.39	3 3 51.43	3.417*	8	.26	70 47 23.60	13.94*
138	ζ Arietis	...	1	.95	3 7 5.31	3.435	1	.95	69 27 42.81	13.73
139	B.A.C. 1005 ...	...	1	.91	3 7 57.78	2.499	1	.91	120 18 50.64	13.68
140	B.A.C. 1012 ...	...	1	.00	3 9 9.51	+2.579	1	.00	116 36 23.52	−13.60

No.	Name of Star.	Mag.	Number of Obs. of R.A.	Fraction of the Year for Mean.	Mean R.A. 1864, Jan. 1.	Precession in R.A.	Number of Obs. of N.P.D.	Fraction of the Year for Mean.	Mean N.P.D. 1864, Jan. 1.	Precession in N.P.D.
					h. m. s.	s.			° ′ ″	″
141	59 Arietis	7·0	2	0·49	3 11 48·90	+3·568	2	0·49	63 25 23·70	−13·44
142	B.A.C. 1032 ...	7·5	2	·46	3 13 2·70	3·434	2	·46	69 59 2·03	13·35
143	τ^1 Arietis	...	4	·25	3 13 22·79	3·447	4	·25	69 20 42·82	13·33
144	B.A.C. 1054 ...	...	1	·00	3 16 25·69	2·576	1	·00	116 4 34·55	13·13
145	65 Arietis	...	1	·01	3 16 35·87	3·445	1	·01	69 40 53·40	13·12
146	o Tauri	...	3	·34	3 17 29·89	3·223	3	·34	81 27 6·85	13·06
147	B.A.C. 1064 ...	...	2	·93	3 19 17·72	3·408	2	·93	71 43 18·14	12·94
148	B.A.C. 1079 ...	7·3	2	·49	3 22 2·24	3·372	2	·49	73 42 29·66	12·75
149	*f* Tauri	...	3	·06	3 23 22·09	3·300	2	·04	77 31 52·27	12·67
150	ε Eridani	...	4	·27	3 26 31·49	2·887	3	·32	99 55 14·77	12·44
151	B.A.C. 1102 ...	...	2	·01	3 27 31·49	3·422	2	·01	71 33 8·27	12·38
152	B.A.C. 1109 ...	...	1	·92	3 29 6·56	2·401	1	·92	122 19 50·11	12·27
153	B.A.C. 1114 ...	7·6	2	·50	3 30 10·20	3·355	2	·50	75 1 6·57	12·19
154	11 Tauri	6·5	1	·09	3 32 39·15	3·567	...	...	65 7	......
155	B.A.C. 1130 ...	...	1	·00	3 33 8·27	2·491	1	·00	118 23 20·69	11·99
156	*o* Persei	...	...	...	3 33 46	......	2	·91	56 28 27·57	11·95
157	δ Eridani	...	6	·53	3 36 44·06	2·875	4	·49	100 13 33·55	11·73
158	24 Eridani......	...	2	·50	3 37 36·32	3·041	2	·50	91 35 41·08	11·68
159	η Tauri	...	3	·65	3 39 24·28	3·551*	4	·47	66 19 5·32	11·48*
160	B.A.C. 1170 ...	7·0	1	·09	3 40 18·20	3·536	1	·09	66 59 56·28	11·48
161	B.A.C. 1179 ...	...	1	·00	3 40 54·77	2·443	1	·00	119 45 46·42	11·44
162	B.A.C. 1186 ...	...	1	·02	3 41 39·61	3·544	1	·02	66 42 21·54	11·38
163	B.A.C. 1193 ...	...	1	·08	3 42 25·11	3·035	1	·08	91 52 12·20	11·33
164	B.A.C. 1194 ...	...	1	·92	3 42 26·56	2·419	1	·92	120 34 40·34	11·33
165	B.A.C. 1206 ...	6·7	2	·04	3 45 23·63	3·410	2	·04	73 4 48·51	11·11
166	B.A.C. 1226 ...	6·8	2	·10	3 49 47·61	3·182	2	·10	84 21 16·69	10·79
167	γ Eridani	...	1	·07	3 51 41·29	2·794*	...	...	103 54	......
168	B.A.C. 1239 ...	...	1	·00	3 52 51·16	3·417	1	·00	73 5 23·34	10·56
169	B.A.C. 1237 ...	...	...	...	3 53 9	......	2	·91	31 13 38·86	10·54
170	Groombr. 750 .	...	...	...	3 54 54	......	13	·22	4 48 32·74	10·41
171	36 Tauri	...	2	·51	3 56 13·87	3·575	2	·51	66 16 16·66	10·30
172	40 Tauri	6·0	1	·00	3 56 32·28	3·172	1	·00	84 56 32·26	10·28
173	ψ Tauri	6·5	1	·09	3 58 36·19	3·700	1	·09	61 22 9·45	10·13
174	Lalande 7655 .	...	1	·91	4 0 26·36	3·479	1	·91	70 37 40·86	−10·00
175	ω^1 Tauri	6·3	4	·31	4 1 14·69	+3·476	...	...	70 45	......

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					h. m. s.	s.			° ′ ″	″
176	B.A.C. 1281 ...	...	1	0·08	4 3 17·92	+3·412	1	0·08	73 42 39·54	− 9·77
177	o^1 Eridani	...	4	·27	4 5 13·69	2·921*	2	·46	97 11 42·83	9·70*
178	B.A.C. 1295 ...	7·0	2	·51	4 6 8·73	3·247	2	·51	81 27 32·34	9·55
179	W.B.(1) iv. 180	7·2	3	·31	4 10 12·83	3·117	3	·31	87 48 29·65	9·24
180	Lalande 8048 .	6·5	1	·91	4 10 40·36	2·929	1	·91	96 48 37·23	9·21
181	56 Tauri	6·3	2	·09	4 11 33·95	3·538	2	·09	68 33 26·41	9·12
182	γ Tauri	...	4	·30	4 12 3·37	3·396	...	...	74 42	......
183	B.A.C. 1340 ...	...	1	·00	4 14 1·51	2·503	1	·00	115 21 14·62	8·94
184	δ^1 Tauri	...	1	·12	4 15 5·83	3·442	1	·12	72 46 45·31	8·86
185	55 Persei	...	...	...	4 15 40	......	2	·00	56 11 13·23	8·82
186	ξ Eridani	6·0?	1	·08	4 16 54·50	2·986	1	·08	94 3 45·10	8·72
187	κ^1 Tauri	...	1	·08	4 17 15·93	3·557	1	·08	68 1 11·54	8·69
188	υ^1 Tauri	...	4	·92	4 18 10·42	3·571	5	·92	67 29 52·88	8·62
189	υ^2 Tauri	6·3	2	·12	4 19 9·67	3·577	2	·12	67 18 47·99	8·54
190	ϵ Tauri	...	3	·33	4 20 40·70	3·492*	4	·26	71 7 27·28	8·39*
191	44 Eridani......	...	2	·07	4 21 30·42	3·094	2	·07	88 55 24·07	8·36
192	B.A.C. 1406 ...	7·5	2	·10	4 25 51·31	3·423	2	·10	73 57 58·73	8·00
193	46 Eridani......	6·0	1	·00	4 27 17·22	2·919	1	·00	97 1 36·37	7·89
194	B.A.C. 1418 ...	7·0	1	·00	4 27 37·33	2·916	1	·00	97 7 25·52	7·87
195	Aldebaran	...	2	·53	4 28 7·22	3·435*	1	·95	73 46 1·60	7·65*
196	B.A.C. 1423 ...	...	1	·09	4 28 36·40	2·395	1	·09	118 44 4·22	7·79
197	B.A.C. 1427 ...	7·7	1	·08	4 29 15·13	2·987	1	·08	93 53 36·04	7·73
198	B.A.C. 1443 ...	6·0	2	·12	4 32 33·01	2·798	2	·12	102 23 40·45	7·47
199	Rad. 1272, S.P.	...	...	...	4 33 19	.....	4	·49	3 54 35·08	7·41
200	τ Tauri	...	1	·94	4 34 5·07	3·590	2	·92	67 18 25·69	7·34
201	B.A.C. 1452 ...	6·5	2	·04	4 35 1·03	3·868	2	·04	57 23 37·20	7·27
202	55 Eridani (1).	7·0	1	·13	4 37 3·16	2·871	1	·13	99 3 6·24	7·10
203	55 Eridani (2).	7·0	1	·13	4 37 3·68	2·871	1	·13	99 3 12·36	7·10
204	μ Eridani	...	3	·11	4 38 42·20	2·994	2	·12	93 30 25·13	6·96
205	B.A.C. 1475 ...	6·3	1	·13	4 40 31·44	3·867	1	·13	57 39 13·22	6·81
206	B.A.C. 1482 ...	...	1	·00	4 41 0·28	2·392	1	·00	118 20 8·38	6·77
207	59 Eridani......	6·0	1	·00	4 42 25·52	2·695	1	·00	106 34 23·71	6·66
208	B.A.C. 1488 ...	...	1	·09	4 42 31·10	2·334	1	·09	120 15 58·07	6·65
209	2 Aurigæ	5·7	1	·15	4 43 32·07	4·004	1	·15	53 31 47·90	6·57
210	B.A.C. 1497 ...	6·7	2	·09	4 44 17·63	+3·734	2	·09	62 19 59·24	− 6·51

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					h. m. s.	s.			° ′ ″	″
211	B.A.C. 1505 ...	7·5	1	0·13	4 46 11·83	+3·454	1	0·13	73 12 0·54	− 6·34
212	5 Orionis	...	1	·01	4 46 17·35	3·122	1	·01	87 43 5·20	6·34
213	B.A.C. 1509 ...	...	...	...	4 47 18	......	2	·08	16 26 41·85	6·25
214	B.A.C. 1517 ...	8·0	1	·13	4 47 30·15	3·445	1	·13	73 35 52·36	6·23
215	ι Aurigæ	...	2	·56	4 48 8·47	3·894*	1	·95	57 3 9·12	6·17*
216	B.A.C. 1526 ...	7·0	1	·13	4 49 31·35	3·459	1	·13	73 3 44·21	6·06
217	99 Tauri	...	2	·91	4 49 33·61	3·631	2	·91	66 16 0·80	6·06
218	B.A.C. 1537 ...	6·3	1	·13	4 51 16·63	3·397	1	·13	75 40 3·30	5·91
219	ι Tauri	6·0	4	·12	4 54 58·18	3·573	4	·12	68 36 25·71	5·62
220	B.A.C. 1555 ...	...	1	·16	4 56 15·40	3·566	1	·16	68 54 58·10	5·51
221	B.A.C. 1564 ...	...	2	·13	4 57 13·84	2·267	2	·13	121 58 15·15	5·43
222	B.A.C. 1563 ...	...	1	·95	4 57 31·08	3·530	1	·95	70 23 1·48	5·40
223	*m* Tauri.........	5·7	1	·13	4 59 24·79	3·502	1	·13	71 32 23·94	5·24
224	ε Leporis	...	2	·54	4 59 42·32	2·536*	1	·93	112 33 19·97	5·15*
225	B.A.C. 1578 ...	...	1	·13	4 59 45·04	2·431	1	·13	116 20 15·61	5·21
226	66 Eridani......	...	1	·01	5 0 2·56	2·961	1	·01	94 50 23·29	5·19
227	B.A.C. 1594 ...	7·0	1	·16	5 2 30·71	3·379	1	·16	76 37 32·86	4·98
228	B.A.C. 1601 ...	...	3	·06	5 3 52·92	3·440	3	·06	74 7 31·88	4·86
229	Capella	...	1	·15	5 6 38·99	4·421*	1	·15	44 8 37·47	4·19*
230	108 Tauri	7·5	1	·08	5 7 17·26	3·600	1	·08	67 52 25·73	4·57
231	Rigel	...	3	·12	5 8 0·23	2·880*	...	...	98 22	......
232	18 Orionis......	6·0	1	·13	5 8 31·05	3·329	1	·13	78 48 55·27	4·46
233	18 Aurigæ......	7·7	1	·13	5 10 25·64	3·946	1	·13	56 9 41·38	4·30
234	B.A.C. 1643 ...	...	1	·06	5 11 25·41	2·753	2	·06	103 40 2·39	4·22
235	B.A.C. 1647 ...	8·0	1	·11	5 12 17·11	3·532	1	·11	70 33 51·21	4·15
236	B.A.C. 1651 ...	6·9	2	·10	5 12 54·76	3·539	2	·10	70 19 35·85	4·09
237	ν Leporis	...	1	·08	5 13 40·40	2·781	1	·08	102 27 26·55	4·02
238	B.A.C. 1655 ...	...	1	·00	5 13 58·55	2·388	1	·00	117 30 40·58	4·00
239	B.A.C. 1656 ...	6·5	1	·16	5 14 19·37	3·261	1	·16	81 42 33·94	3·97
240	σ Aurigæ	...	1	·15	5 15 24·69	4·068	1	·15	52 44 41·12	3·88
241	110 Tauri	7·0	1	·00	5 15 46·37	3·461	1	·00	73 25 57·60	3·85
242	8 Leporis	...	1	·01	5 17 17·17	2·742	1	·01	104 3 28·13	3·71
243	ψ^1 Orionis......	5·7	1	·13	5 17 41·47	3·110	1	·13	88 16 52·26	3·68
244	β Tauri.........	...	1	·13	5 17 41·80	3·787*	...	...	61 31	......
245	113 Tauri	...	1	·95	5 18 14·26	+3·462	1	·95	73 25 26·80	− 3·63

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					h. m. s.	s.			° ′ ″	″
246	Groombr. 944 .	5·7	...	...	5 18 45	......	1	0·09	4 53 5·42	− 3·59
247	115 Tauri	...	1	0·08	5 19 14·40	+3·495	1	·08	72 9 27·48	3·55
248	B.A.C. 1699 ...	8·3	2	·09	5 19 41·11	3·447	2	·09	74 4 44·27	3·51
249	B.A.C. 1711 ...	...	1	·13	5 22 9·98	3·563	1	·13	69 33 29·90	3·30
250	B.A.C. 1714 ...	7·0	1	·11	5 22 30·85	3·613	1	·11	67 38 46·14	3·27
251	π^1 Orionis	...	1	·08	5 24 6·50	3·144	1	·08	86 48 50·54	3·12
252	B.A.C. 1728 (1)	6·5	1	·13	5 24 21·37	3·474	1	·13	73 2 45·00	3·11
253	B.A.C. 1728 (2)	7·0	1	·13	5 24 21·81	3·474	1	·13	73 2 53·96	3·11
254	δ Orionis	...	6	·12	5 25 3·58	3·064*	1	·01	90 24 9·60	3·01*
255	10 Leporis......	...	1	·00	5 25 18·55	2·564	1	·00	110 58 0·19	3·03
256	α Leporis	...	5	·13	5 26 43·93	3·646*	4	·11	107 55 19·11	2·90*
257	π^2 Orionis	7·0	1	·09	5 27 7·26	3·155	2	·13	86 19 44·67	2·87
258	ϵ Orionis	...	1	·19	5 29 18·99	3·041*	...	...	91 18	......
259	ζ Tauri	...	2	·61	5 29 31·10	3·581	2	·61	68 56 36·29	2·66
260	B.A.C. 1783 ...	...	1	·13	5 31 54·45	2·366	1	·13	117 57 10·62	2·45
261	B.A.C. 1787 ...	...	1	·12	5 32 26·10	2·342	1	·12	118 46 22·36	2·41
262	B.A.C. 1789 ...	6·3	2	·06	5 32 44·90	2·986	2	·06	93 38 37·68	2·38
263	126 Tauri	...	1	·19	5 33 26·16	3·463	1	·19	73 32 23·37	2·32
264	B.A.C. 1793 ...	7·3	1	·17	5 33 51·00	3·624	1	·17	67 24 37·65	2·28
265	α Columbæ ...	...	1	·19	5 34 43·40	2·178*	1	·19	124 8 58·19	2·21*
266	Rümker 1530 .	9·0	1	·09	5 34 48·71	3·624	1	·09	67 23 36·09	2·20
267	127 Tauri	8·0	1	·08	5 34 53·71	3·526	1	·08	71 5 16·74	2·19
268	B.A.C. 1811 ...	7·3	1	·95	5 37 12·31	3·519	1	·95	71 21 27·60	1·99
269	B.A.C. 1826 ...	7·2	3	·15	5 39 24·23	3·293	3	·15	80 31 49·57	1·80
270	131 Tauri	6·0	1	·13	5 39 28·55	3·413	1	·13	75 33 51·14	1·79
271	B.A.C. 1831 ...	...	1	·16	5 39 34·05	3·096	1	·16	88 52 57·96	1·78
272	κ Orionis	...	4	·14	5 41 18·36	2·842	...	...	99 43	......
273	υ Aurigæ	...	1	·08	5 41 45·81	4·085	1	·08	52 44 13·11	1·59
274	55 Orionis......	7·0	1	·09	5 44 47·92	2·894	2	·09	97 33 26·44	1·33
275	56 Orionis......	5·5	2	·05	5 45 22·74	3·113	2	·05	88 10 53·30	1·28
276	χ^1 Orionis......	...	1	·95	5 46 19·71	3·563	1	·95	69 45 9·79	1·20
277	χ^2 Orionis......	...	1	·00	5 46 53·75	3·549	1	·00	70 16 50·20	1·15
278	α Orionis	...	5	·15	5 47 48·57	3·246*	2	·13	82 37 15·84	1·06*
279	B.A.C. 1882 ...	7·3	1	·17	5 47 55·63	3·808	1	·17	61 4 59·58	1·05
280	B.A.C. 1893 ...	7·0	2	·11	5 48 59·68	+3·294	2	·11	80 30 53·36	−0·96

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					h. m. s.	s.			° ′ ″	″
281	60 Orionis......	6·0	2	0·11	5 51 50·12	+3·083	2	0·11	89 27 44·78	− 0·71
282	Groombr. 1004	6·8	...	...	5 52 0	......	1	·16	3 14 18·79	0·70
283	2 Monocerotis .	...	2	·06	5 52 36·86	2·845	2	·06	99 34 12·68	0·64
284	χ^2 Orionis......	...	2	·13	5 55 24·40	3·549	2	·13	70 18 37·97	0·40
285	1 Geminorum .	...	2	·10	5 55 51·15	3·645	1	·00	66 43 59·73	0·36
286	63 Orionis......	6·5	1	·08	5 57 43·05	3·198	2	·08	84 34 31·54	0·20
287	B.A.C. 1956 ...	...	1	·11	5 59 1·65	2·829	1	·11	100 14 10·29	− 0·09
288	ν Orionis	...	3	·14	5 59 48·45	3·426*	3	·14	75 13 5·70	0·00*
289	B.A.C. 1961 ...	...	1	·00	6 0 29·95	2·807	1	·00	101 9 42·42	+ 0·04
290	B.A.C. 1967 ...	...	1	·16	6 0 51·34	2·307	1	·16	119 44 47·71	0·08
291	19 Leporis......	...	1	·12	6 1 46·66	2·606	1	·12	109 10 7·91	0·16
292	4 Geminorum .	...	2	·14	6 2 15·01	3·639	2	·14	66 58 49·27	0·20
293	6 Geminorum .	...	1	·19	6 4 4·45	3·636	1	·19	67 3 51·24	0·36
294	B.A.C. 1997 ...	...	1	·11	6 5 46·08	2·406	1	·11	116 27 15·52	0·51
295	η Geminorum .	...	2	·20	6 6 40·09	3·626	1	·19	67 27 24·90	0·58
296	2 Lyncis	...	...	...	6 7 37	......	2	·09	30 56 43·24	0·67
297	k^1 Orionis......	...	1	·08	6 8 6·63	3·369	1	·08	77 24 32·50	0·71
298	B.A.C. 2021 ...	...	2	·11	6 9 47·64	4·015	2	·11	54 44 34·71	0·85
299	6 Monocerotis .	...	1	·17	6 11 11·97	2·819	1	·17	100 40 33·58	0·98
300	μ Geminorum .	...	4	·24	6 14 44·00	3·632*	1	·17	67 25 12·81	1·42*
301	B.A.C. 2057 ...	...	1	·17	6 16 8·91	3·160	1	·17	86 10 14·05	1·42
302	8 Monocerotis .	...	1	·08	6 16 33·77	3·179	1	·08	85 20 27·23	1·45
303	B.A.C. 2060 ...	...	1	·08	6 16 34·31	3·180	1	·08	85 20 14·22	1·45
304	β Canis Maj....	...	1	·00	6 16 42·50	2·640	1	·00	107 53 26·98	1·46
305	77 Orionis......	6·3	2	·20	6 20 14·78	3·080	2	·20	89 37 19·58	1·77
306	ν Geminorum .	...	...	...	6 20 53	......	2	·09	69 42 15·04	1·83
307	10 Monocerotis	6·3	1	·17	6 21 14·84	2·962	1	·17	94 40 52·29	1·86
308	11 Monocerotis	...	1	·21	6 22 13·35	2·909	1	·21	96 56 55·92	1·94
309	19 Geminorum	...	1	·08	6 23 48·00	3·452	1	·08	74 0 16·27	2·08
310	20 Geminorum	...	1	·21	6 24 21·61	3·500	1	·21	72 7 40·64	2·13
311	B.A.C. 2116 ...	...	1	·21	6 24 22·03	3·500	1	·21	72 7 23·77	2·13
312	12 Monocerotis	...	3	·06	6 25 6·05	3·186	3	·06	85 2 57·14	2·20
313	B.A.C. 2130 ...	6·5	1	·20	6 26 13·80	3·885	1	·12	58 27 48·38	2·29
314	22 Geminorum	...	1	·17	6 26 37·92	3·542	1	·17	70 28 7·94	2·32
315	14 Monocerotis	6·5	3	·15	6 27 24·61	+3·250	3	·15	82 19 29·15	+ 2·40

No.	Name of Star.	Mag.	Number of Obs. of R.A.	Fraction of the Year for Mean.	Mean R.A. 1864, Jan. 1.	Precession in R.A.	Number of Obs. of N.P.D.	Fraction of the Year for Mean.	Mean N.P.D. 1864, Jan. 1.	Precession in N.P.D.
					h. m. s.	s.			° ′ ″	″
316	γ Geminorum .	...	5	0·20	6 29 51·23	+3·466*	...	...	73 29	......
317	B.A.C. 2173 ...	...	1	·19	6 32 0·01	3·546	1	0·19	70 13 13·47	+ 2·79
318	15 Monocerotis	6·0	3	·17	6 33 29·20	3·305	3	·17	79 58 53·90	2·92
319	B.A.C. 2189 ...	6·7	1	·00	6 34 5·73	3·085	2	·04	89 22 49·95	2·97
320	Cep. 51 (Hev.)	...	1	·66	6 35 42·21	30·368*	35	·44	2 45 18·05	3·21*
321	Sirius............	...	1	·16	6 39 8·98	2·645*	1	·16	106 31 55·75	4·64*
322	11 Canis Maj. .	6·5	1	·08	6 40 38·91	2·736	1	·08	104 16 56·28	3·54
323	12 Canis Maj. .	...	3	·21	6 41 12·02	2·569	3	·21	110 52 14·34	3·59
324	35 Geminorum	...	1	·17	6 42 45·12	3·387	1	·17	76 26 1·35	3·72
325	θ Canis Maj....	...	5	·11	6 47 52·27	2·796	4	·10	101 52 15·25	4·16
326	B.A.C. 2265 ...	7·3	2	·15	6 48 21·93	3·493	2	·15	72 5 22·88	4·20
327	40 Geminorum	6·0	1	·21	6 51 3·97	3·709	1	·21	63 54 16·02	4·43
328	W.B.(2)vi. 1534	7·5	1	·12	6 51 16·48	3·450	1	·12	73 46 44·05	4·45
329	B.A.C. 2280 ...	...	1	·19	6 52 1·97	3·447	1	·19	73 52 31·61	4·52
330	ε Canis Maj....	...	2	·16	6 53 16·85	2·358*	1	·11	118 47 20·55	4·63*
331	ζ Geminorum .	...	3	·23	6 56 2·40	3·562	3	·23	69 14 0·12	4·86
332	B.A.C. 2306 ...	6·5	1	·13	6 56 5·87	3·326	1	·13	78 51 5·36	4·86
333	19 Monocerotis	...	1	·08	6 56 9·64	2·979	1	·08	94 2 41·90	4·87
334	44 Geminorum	6·3	2	·15	6 57 7·16	3·616	2	·15	67 9 42·70	4·95
335	γ Canis Maj....	...	3	·18	6 57 36·34	2·716*	1	·10	105 26 4·23	4·98*
336	Piazzi vi. 329...	7·5	1	·21	7 0 14·11	3·435	1	·21	74 15 16·44	5·21
337	B.A.C. 2329 ...	7·5	1	·11	7 0 25·74	3·434	1	·11	74 15 39·58	5·23
338	B.A.C. 2326 ...	...	...	...	7 2 16	......	4	·16	7 20 18·05	5·38
339	48 Geminorum	6·0	2	·16	7 4 10·47	3·652	2	·16	65 38 49·15	5·54
340	B.A.C. 2356 ...	...	1	·23	7 4 36·05	3·202	1	·23	84 7 23·33	5·58
341	51 Geminorum	5·5	3	·17	7 5 33·62	3·448	2	·09	73 26 48·75	5·66
342	24 Monocerotis	...	1	·17	7 8 21·99	3·072	1	·17	89 55 41·56	5·89
343	B.A.C. 2385 ...	...	1	·21	7 8 33·48	2·308	1	·21	120 51 8·76	5·91
344	B.A.C. 2387 ...	...	1	·10	7 8 56·72	3·446	1	·10	73 37 3·16	5·95
345	B.A.C. 2393 ...	...	1	·11	7 9 21·27	2·426	1	·11	116 48 9·15	5·98
346	λ Geminorum .	...	4	·22	7 10 16·53	3·455	4	·22	73 13 0·00	6·06
347	Radcliffe 1928 .	...	...	...	7 11 48	......	4	·11	11 2 32·63	6·19
348	δ Geminorum .	...	2	·22	7 11 59·89	3·592*	...	...	67 46	......
349	29 Canis Maj. .	6·5	1	·12	7 13 0·73	2·497	1	·12	114 18 44·19	6·28
350	56 Geminorum	...	2	·16	7 13 55·24	+3·550	2	·16	69 18 10·00	+ 6·36

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					h. m. s.	s.			° ′ ″	″
351	B.A.C. 2433 ...	6·3	2	0·14	7 15 4·79	+3·080	2	0·14	89 34 5·39	+ 6·45
352	B.A.C. 2432 ...	...	1	·10	7 15 10·34	3·495	1	·10	71 28 9·86	6·46
353	B.A.C. 2437 ...	...	1	·19	7 15 45·03	2·944	1	·19	95 43 33·78	6·51
354	1 Canis Min....	...	...	...	7 17 25	......	2	·15	78 4 0·04	6·65
355	*s* Puppis	...	1	·13	7 17 48·87	2·293	1	·13	121 40 11·08	6·68
356	β Canis Min....	...	...	...	7 19 47	......	2	·16	81 26 20·78	6·84
357	η Canis Min....	...	1	·09	7 20 43·24	3·229	1	·09	82 46 56·81	6·92
358	δ^1 Canis Min. .	6·0	2	·16	7 25 2·09	3·118	2	·16	87 48 1·14	7·27
359	67 Geminorum	...	1	·23	7 25 39·32	3·426	1	·23	74 4 20·39	7·32
360	68 Geminorum	...	2	·15	7 25 50·73	3·430	2	·15	73 53 3·04	7·34
361	Castor	...	2	·20	7 25 55·07	3·843*	2	·08	57 48 59·85	7·42*
362	δ^2 Canis Min. .	...	1	·13	7 26 3·65	3·148	1	·13	86 25 19·56	7·36
363	δ^3 Canis Min. .	6·0	1	·15	7 27 7·77	3·150	1	·15	86 20 8·93	7·44
364	25 Monocerotis	6·0	1	·13	7 30 31·03	2·988	1	·13	93 48 36·97	7·72
365	Procyon	...	1	·12	7 32 10·93	3·145*	...	...	84 26	......
366	*m* Puppis	...	2	·19	7 32 38·40	2·496	2	·19	115 3 28·77	7·89
367	B.A.C. 2538 ...	...	1	·23	7 34 10·05	2·744	1	·23	104 57 5·35	8·01
368	B.A.C. 2537 ...	6·0	2	·12	7 34 14·20	3·372	2	·12	76 12 14·24	8·01
369	Pollux	...	1	·28	7 36 59·25	3·682*	8	·16	61 38 53·84	8·30*
370	79 Geminorum	...	2	·09	7 37 10·22	3·529	2	·09	69 21 38·07	8·26
371	B.A.C. 2557 ...	...	1	·21	7 37 11·19	2·476	1	·21	116 1 49·79	8·26
372	1 Puppis	5·0	1	·21	7 38 3·00	2·422	1	·21	118 5 22·77	8·33
373	*g* Geminorum .	...	2	·28	7 38 14·99	3·486	2	·28	71 9 39·84	8·34
374	B.A.C. 2565 ...	...	1	·22	7 38 51·34	2·521	1	·22	114 20 56·50	8·38
375	Rad. 2020, S.P.	...	...	...	7 40 17	......	1	·65	3 55 16·50	8·50
376	B.A.C. 2587 ...	...	2	·18	7 41 21·82	2·578	2	·18	112 11 12·68	8·59
377	5 Puppis	6·0	2	·13	7 41 34·57	2·817	2	·13	101 51 37·78	8·60
378	B.A.C. 2609 ...	...	1	·08	7 43 23·59	2·340	1	·08	121 16 47·90	8·74
379	ξ Argûs	...	3	·18	7 43 34·49	2·522	1	·22	114 31 13·93	8·76
380	Groombr. 1539	...	...	...	7 43 55	......	2	·17	5 33 42·40	8·79
381	B.A.C. 2605 ...	6·3	1	·10	7 44 2·34	3·500	1	·10	70 19 48·84	8·80
382	8 Puppis	...	1	·21	7 45 19·29	2·806	1	·21	102 28 25·12	8·89
383	10 Puppis	...	1	·09	7 46 3·51	2·762	1	·09	104 29 56·00	8·95
384	85 Geminorum	6·3	2	·11	7 47 43·50	3·510	2	·11	69 45 33·74	9·08
385	14 Canis Min. .	...	1	·08	7 51 17·43	+3·124	1	·08	87 24 54·59	+ 9·36

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					h. m. s.	s.			° ′ ″	″
386	B.A.C. 2654 ...	6·5	3	0·20	7 51 59·43	+3·357	3	0·20	76 23 25·66	+ 9·41
387	ω^1 Cancri	...	1	·12	7 52 41·95	3·640	1	·12	64 14 14·55	9·47
388	27 Monocerotis	6·3	2	·09	7 52 56·44	3·002	2	·09	93 18 41·23	9·49
389	12 Puppis	...	2	·19	7 53 15·81	2·573	2	·19	112 56 34·61	9·52
390	6 Cancri	...	2	·23	7 55 9·67	3·695*	1	·28	61 49 38·10	9·73*
391	B.A.C. 2679 ...	...	1	·13	7 55 48·41	3·284	1	·13	79 40 44·83	9·71
392	B.A.C. 2683 ...	6·7	1	·08	7 56 53·64	3·477	1	·08	70 46 33·95	9·79
393	B.A.C. 2677 ...	...	...	...	7 57 54	......	2	·11	7 9 28·59	9·87
394	B.A.C. 2706 ...	7·0	2	·22	7 58 24·19	2·709	2	·22	107 16 57·05	9·91
395	11 Cancri	...	2	·21	8 0 30·42	3·683	2	·21	62 7 36·53	10·07
396	ψ^1 Cancri	6·5	1	·15	8 1 59·75	3·639	1	·15	63 45 28·11	10·18
397	B.A.C. 2731 ...	...	2	·09	8 2 15·15	3·431	2	·09	72 35 12·82	10·20
398	B.A.C. 2739 ...	...	1	·08	8 3 15·49	2·745	1	·08	105 51 6·30	10·28
399	B.A.C. 2737 ...	7·0	1	·12	8 3 20·23	3·378	1	·12	74 58 14·85	10·28
400	ζ Cancri	...	4	·25	8 4 24·54	3·444	4	·25	71 56 41·19	10·36
401	B.A.C. 2748 ...	...	2	·18	8 4 45·50	3·365	2	·18	75 35 33·20	10·39
402	β Cancri	...	7	·17	8 9 8·21	3·262	2	·09	80 23 50·57	10·72
403	B.A.C. 2782 ...	...	2	·09	8 10 9·73	3·255	2	·09	80 42 56·51	10·79
404	B.A.C. 2791 ...	...	2	·17	8 12 40·74	3·156	2	·17	85 37 36·38	10·97
405	Piazzi viii. 48 .	7·5	1	·08	8 14 57·26	3·289	1	·08	78 54 28·30	11·13
406	Groombr. 1418	...	...	...	8 15 18	......	4	·36	4 28 30·73	11·17
407	d^1 Cancri	...	5	·12	8 15 34·47	3·448	2	·10	71 14 0·64	11·19
408	W.B.(1)viii.425	...	1	·08	8 17 8·95	3·228	1	·08	81 55 28·84	11·30
409	B.A.C. 2822 ...	5·5	3	·24	8 18 36·94	3·226	3	·24	81 59 40·72	11·40
410	B.A.C. 2839 ...	...	1	·22	8 21 14·74	2·472	1	·22	118 46 13·33	11·59
411	B.A.C. 2841 ...	...	1	·13	8 21 39·23	3·617	1	·13	63 21 19·73	11·62
412	B.A.C. 2843 ...	...	1	·08	8 21 48·86	2·410	1	·08	121 13 36·32	11·63
413	W.B.(2)viii.523	7·3	2	·17	8 23 12·54	3·453	2	·17	70 34 40·65	11·73
414	η Cancri	...	5	·21	8 24 50·40	3·480*	2	·21	69 5 56·95	11·91*
415	B.A.C. 2868 ...	...	1	·08	8 25 24·32	2·698	1	·08	109 7 14·78	11·89
416	B.A.C. 2872 ...	6·9	2	·13	8 26 12·90	3·332	2	·13	76 16 45·64	11·95
417	Radcliffe 2162 .	...	...	...	8 27 13	......	3	·54	5 36 59·81	12·02
418	35 Cancri	...	2	·22	8 27 30·26	3·461	2	·22	69 56 38·02	12·04
419	B.A.C. 2888 ...	7·0	3	·17	8 28 30·06	3·372	3	·17	74 13 6·17	12·11
420	c^1 Cancri	...	1	·25	8 29 43·30	+3·261	1	·25	79 52 29·00	+12·19

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					h. m. s.	s.			° ′ ″	″
421	c^2 Cancri	6·5	1	0·24	8 30 43·15	+3·259	1	0·24	79 57 8·47	+12·26
422	B.A.C. 2907 ...	8·5	1	·17	8 31 20·77	3·456	1	·17	69 55 57·95	12·31
423	*g* Mali	6·0	3	·11	8 32 3·68	2·562	2	·13	115 46 48·28	12·35
424	40 Cancri	...	1	·29	8 32 21·97	3·463	1	·29	69 33 4·15	12·37
425	B.A.C. 2925 ...	7·3	1	·17	8 33 8·39	3·454	1	·17	69 56 25·32	12·43
426	6 Hydræ	...	1	·10	8 33 34·72	2·848	1	·10	101 59 49·39	12·46
427	*f* Mali	...	2	·13	8 34 4·00	2·489	2	·13	119 4 44·60	12·49
428	Rad. 2189, S.P.	...	...	...	8 36 27	......	2	·67	5 55 6·54	12·65
429	δ Cancri.........	...	1	·25	8 36 57·13	3·420	1	·28	71 20 52·94	12·69
430	10 Hydræ......	6·5	1	·24	8 37 49·20	3·182	1	·24	83 49 43·70	12·74
431	ε Hydræ	...	1	·23	8 39 34·22	3·184*	2	·28	83 5 3·93	12·90*
432	12 Hydræ	6·0	2	·21	8 39 56·98	2·834	2	·21	103 3 9·12	12·89
433	B.A.C. 2977 ...	7·4	2	·12	8 41 10·76	3·307	2	·12	76 57 12·46	12·97
434	14 Hydræ	...	1	·25	8 42 31·69	3·018	1	·25	92 56 24·34	13·06
435	B.A.C. 2990 ...	7·0	2	·16	8 42 58·04	3·410	2	·16	71 29 35·61	13·09
436	54 Cancri	...	2	·17	8 43 26·86	3·358	2	·17	74 8 49·26	13·12
437	B.A.C. 3005 ...	...	1	·24	8 44 20·38	2·513	1	·24	118 57 33·58	13·18
438	Radcliffe 2218.	...	...	...	8 46 23	......	2	·21	5 16 52·91	13·31
439	B.A.C. 3029 ...	7·2	3	·21	8 47 42·97	3·389	3	·21	72 15 11·34	13·40
440	17 Hydræ	7·5	3	·13	8 48 49·55	2·941	3	·13	97 27 12·98	13·47
441	B.A.C. 3039 ...	7·3	2	·14	8 48 49·72	2·941	2	·14	97 27 8·13	13·47
442	α Cancri	...	4	·23	8 51 2·76	3·286	2	·21	77 37 4·95	13·62
443	68 Cancri	7·5	2	·16	8 54 5·54	3·378	2	·16	72 23 15·37	13·81
444	71 Cancri	8·0	1	·14	8 58 7·32	3·379	1	·14	72 4 6·10	14·07
445	B.A.C. 3103 ...	7·7	3	·18	8 58 38·03	3·373	3	·18	72 20 38·86	14·10
446	ω Hydræ	6·0	2	·25	8 58 48·65	3·165	2	·25	84 21 58·71	14·11
447	κ Cancri	...	7	·18	9 0 22·73	3·257	4	·17	78 47 11·02	14·21
448	B.A.C. 3112 ...	...	...	...	9 0 30	......	2	·21	55 34 1·75	14·21
449	19 Hydræ	...	1	·25	9 2 2·80	2·938	1	·25	98 2 30·84	14·31
450	20 Hydræ	6·3	1	·21	9 2 56·51	2·935	1	·21	98 14 15·16	14·36
451	*e* Mali	...	2	·13	9 4 10·62	2·539	2	·13	119 48 41·88	14·44
452	B.A.C. 3133 ...	6·7	2	·26	9 5 6·72	3·142	2	·26	85 34 39·66	14·49
453	B.A.C. 3164 ...	7·0	2	·24	9 10 28·40	3·263	2	·24	77 55 51·66	14·81
454	25 Hydræ	7·3	2	·18	9 10 56·61	2·890	2	·18	101 23 32·16	14·84
455	83 Cancri	6·5	4	·24	9 11 23·30	+3·357*	2	·24	71 43 13·79	+15·03*

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					h. m. s.	s.			° ′ ″	″
456	B.A.C. 3176....	7·3	1	0·21	9 12 11·59	+3·234	1	0·21	79 38 17·55	+14·91
457	B.A.C. 3185 ...	7·7	1	·21	9 13 42·64	2·930	1	·21	99 2 8·00	15·00
458	B.A.C. 3202 ...	8·0	1	·19	9 16 15·13	3·199	1	·19	81 42 17·13	15·15
459	B.A.C. 3203 ...	7·5	1	·14	9 16 30·69	3·160	1	·14	84 11 56·08	15·16
460	A Hydræ	...	1	·21	9 18 35·91	3·002	1	·21	94 31 56·85	15·28
461	B.A.C. 3224 ...	...	1	·14	9 20 49·19	2·612	1	·14	118 11 55·46	15·41
462	B.A.C. 3243 ...	7·0	1	·29	9 23 39·08	2·659	1	·29	115 59 55·24	15·57
463	τ^2 Hydræ	...	1	·21	9 25 2·72	3·062	1	·21	90 35 12·31	15·64
464	B.A.C. 3273 ...	7·0	2	·25	9 28 38·14	3·578	2	·25	58 13 49·67	15·84
465	10 Leonis	5·0	1	·29	9 30 1·71	3·177	1	·29	82 33 22·59	15·91
466	11 Leonis	7·0	1	·14	9 30 35·83	3·287	1	·14	75 2 22·23	15·94
467	B.A.C. 3292 ...	...	1	·16	9 31 16·54	3·380	1	·16	69 5 26·05	15·98
468	B.A.C. 3296 ...	...	1	·21	9 31 18·51	2·575	1	·21	121 34 3·85	15·98
469	o Leonis.........	...	2	·22	9 33 53·29	3·218	1	·25	79 29 25·76	16·12
470	B.A.C. 3318 ...	7·3	1	·14	9 35 45·51	3·370	1	·14	69 11 10·95	16·21
471	ϵ Leonis	...	3	·26	9 38 7·51	3·420*	3	·23	65 36 3·82	16·35*
472	θ Antliæ	...	2	·20	9 38 8·56	2·672	2	·20	117 8 52·12	16·33
473	B.A.C. 3340 ...	...	2	·23	9 39 23·27	2·634	2	·23	119 34 40·42	16·40
474	B.A.C. 3343 ...	6·8	1	·16	9 40 5·50	3·368	1	·16	68 46 1·62	16·43
475	v Ursæ Majoris	...	...	...	9 41 18	......	4	·25	30 19 24·89	16·49
476	20 Leonis	6·7	2	·16	9 42 13·28	3·373	2	·16	68 11 16·13	16·54
477	B.A.C. 3356 ...	8·0	2	·29	9 42 33·44	3·227	2	·29	78 15 33·59	16·56
478	21 Leonis	...	2	·22	9 43 30·17	3·236	2	·22	77 31 26·86	16·61
479	μ Leonis	...	...	...	9 45 2	......	2	·21	63 21 13·93	16·68
480	8 Sextantis ...	5·7	2	·21	9 45 46·50	2·974	2	·21	97 27 58·24	16·71
481	Radcliffe 2404 .	...	1	·25	9 46 17·08	10·819	4	·19	5 25 47·18	16·74
482	B.A.C. 3386 ...	7·0	1	·16	9 47 0·00	3·143	1	·16	84 24 53·99	16·77
483	B.A.C. 3391 ...	5·0	1	·14	9 48 2·57	2·726	1	·14	115 17 36·91	16·82
484	26 Leonis	7·5	2	·24	9 50 48·00	3·274	2	·24	74 7 54·77	16·95
485	Radcliffe 2407 .	...	1	·28	9 51 15·40	22·952	1	·28	2 3 10·32	16·97
486	B.A.C. 3409 ...	...	1	·28	9 51 45·21	3·485	1	·28	59 42 16·22	17·00
487	π Leonis	...	9	·24	9 53 1·45	3·177*	8	·24	81 18 16·77	17·09*
488	B.A.C. 3423 ...	6·0	2	·23	9 55 13·70	3·359	2	·23	67 23 46·40	17·15
489	B.A.C. 3428 ...	7·7	1	·14	9 55 57·75	2·916	1	·14	102 38 32·51	17·19
490	B.A.C. 3434 ...	8·0	1	·20	9 56 51·41	+3·219	2	·20	77 42 52·55	+17·23

No.	Name of Star.	Mag.	Number of Obs. of R.A.	Fraction of the Year for Mean.	Mean R.A. 1864, Jan. 1.	Pre-cession in R.A.	Number of Obs. of N.P.D.	Fraction of the Year for Mean.	Mean N.P.D. 1864, Jan. 1.	Pre-cession in N.P.D.
					h. m. s.	s.			° ′ ″	″
491	B.A.C. 3438 ...	...	1	0·17	9 57 41·73	+3·138	1	0·17	84 20 19·00	+17·26
492	A Leonis	...	2	·22	10 0 41·04	3·195	4	·24	79 20 12·97	17·40
493	Regulus.........	...	4	·27	10 1 7·61	3·203*	2	·30	77 22 10·08	17·41*
494	16 Sextantis ...	7·0	2	·24	10 2 7·39	3·150	2	·24	83 9 50·38	17·46
495	33 Leonis	8·0	2	·23	10 3 21·32	3·262	2	·23	73 37 33·99	17·51
496	B.A.C. 3471 ...	6·0	3	·20	10 3 28·22	2·931	2	·20	102 8 40·61	17·52
497	18 Sextantis ...	...	1	·25	10 4 10·12	2·983	1	·25	97 44 56·65	17·55
498	W.B.(2)x.90–1	8·2	2	·30	10 5 25·41	3·472	2	·30	57 57 2·18	17·61
499	22 Leonis Min.	...	...	...	10 7 17	......	2	·19	57 51 28·31	17·68
500	21 Sextantis ...	...	2	·28	10 7 22·00	2·990	2	·28	97 19 9·77	17·68
501	B.A.C. 3506 ...	7·3	1	·14	10 8 51·45	3·278	1	·14	71 35 2·65	17·74
502	Groombr. 1620	6·0	1	·28	10 9 20·12	10·082	11	·44	5 3 36·70	17·76
503	22 Sextantis ...	6·0	2	·21	10 10 52·34	2·991	2	·21	97 23 26·96	17·83
504	B.A.C. 3521 ...	...	3	·25	10 11 53·76	2·744	3	·25	118 18 48·12	17·87
505	γ^1 Leonis	...	4	·28	10 12 28·13	3·317*	...	...	69 28	......
506	B.A.C. 3538 ...	7·5	2	·29	10 15 3·85	3·172	2	·29	80 21 3·96	17·99
507	B.A.C. 3540 ...	7·7	1	·21	10 15 6·12	3·070	1	·21	90 3 58·42	17·99
508	26 Leonis Min.	7·5	1	·30	10 15 12·44	3·498	1	·30	54 5 48·93	17·99
509	27 Leonis Min.	6·7	1	·30	10 15 15·78	3·478	1	·30	55 24 26·47	18·00
510	B.A.C. 3553 ...	6·7	2	·28	10 16 39·42	3·040	2	·28	92 57 24·83	18·05
511	B.A.C. 3562 ...	...	1	·16	10 18 25·25	3·167	1	·16	80 32 0·82	18·12
512	μ Hydræ	...	1	·30	10 19 30·75	2·906	1	·30	106 8 35·35	18·16
513	27 Sextantis ...	7·0	2	·25	10 19 54·72	3·035	2	·25	93 41 51·02	18·18
514	B.A.C. 3582 ...	6·5	2	·27	10 21 50·42	3·041	2	·27	93 2 53·13	18·25
515	B.A.C. 3583 ...	...	1	·31	10 21 59·99	3·176	1	·31	79 8 57·08	18·25
516	B.A.C. 3592 ...	...	1	·24	10 22 43·22	3·092	1	·24	87 48 44·13	18·27
517	δ Antliæ	...	1	·30	10 23 19·86	2·756	1	·30	119 54 43·19	18·30
518	Radcliffe 2507 .	8·0	1	·28	10 25 27·04	9·808	2	·59	4 32 59·57	18·37
519	ρ Leonis	...	1	·33	10 25 38·86	3·167*	...	...	80 0	......
520	ϕ^1 Hydræ......	...	1	·21	10 26 4·26	2·915	1	·21	106 15 24·83	18·40
521	44 Hydræ	...	2	·25	10 27 33·13	2·848	2	·25	113 2 43·48	18·44
522	49 Leonis	7·0	1	·30	10 27 53·86	3·157	1	·30	80 38 55·10	18·46
523	B.A.C. 3637 ...	5·8	2	·31	10 30 50·34	2·956	2	·31	102 40 43·62	18·56
524	50 Leonis	...	1	·31	10 31 36·81	3·223	1	·31	73 9 55·64	18·58
525	B.A.C. 3649 ...	...	1	·23	10 32 34·48	+3·155	1	·23	80 36 58·17	+18·61

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					h. m. s.	s.			° ′ ″	″
526	B.A.C. 3661 ...	7·0	1	0·21	10 34 33·58	+3·379	1	0·21	57 35 30·24	+18·68
527	34 Sextantis ...	7·0	5	·25	10 35 36·13	3·107	6	·27	85 42 26·64	18·71
528	Radcliffe 2543 .	...	...	...	10 35 36	......	2	·21	21 52 36·43	18·71
529	Piazzi x. 140...	7·5	1	·33	10 36 6·72	3·116	1	·33	84 37 16·54	18·73
530	36 Sextantis ...	6·5	2	·26	10 38 9·09	3·097	2	·26	86 47 52·84	18·79
531	B.A.C. 3698 ...	...	1	·28	10 40 15·43	2·855	1	·28	115 20 4·10	18·85
532	43 Leonis Min.	...	1	·25	10 41 26·77	3·332	1	·25	59 51 54·09	18·89
533	*	8·5	1	·21	10 41 58·95	3·008	1	·21	98 1 27·59	18·90
534	*l* Leonis.........	6·3	4	·28	10 42 6·34	3·158*	...	...	78 44	......
535	39 Sextantis ...	7·3	1	·33	10 42 9·46	3·005	1	·33	98 22 54·08	18·91
536	40 Sextantis (N)	...	2	·25	10 42 23·84	3·045	2	·25	93 18 20·92	18·92
537	40 Sextantis (S)	...	2	·25	10 42 23·85	3·045	2	·25	93 18 22·25	18·92
538	41 Sextantis ...	...	2	·24	10 43 28·62	3·008	2	·24	98 10 41·44	18·95
539	Groombr. 1697	...	...	...	10 44 10	......	2	·28	19 25 21·15	18·97
540	b^2 Hydræ	...	1	·19	10 44 27·05	2·934	1	·19	107 36 44·32	18·98
541	B.A.C. 3726 ...	...	1	·22	10 45 14·59	3·083	1	·22	88 15 14·80	19·00
542	45 Leonis Min.	7·5	1	·30	10 45 22·38	3·304	1	·30	61 24 50·94	19·00
543	48 Leonis Min.	7·0	2	·32	10 47 18·73	3·276	2	·32	63 47 10·29	19·05
544	B.A.C. 3737 ...	8·0	2	·25	10 47 41·91	3·118	2	·25	83 25 45·60	19·07
545	49 Leonis Min.	7·4	2	·30	10 48 41·03	3·211	2	·30	71 7 25·19	19·09
546	57 Leonis	7·0	1	·21	10 49 12·07	3·078	1	·21	88 50 32·90	19·11
547	Lalande 21095	...	...	...	10 52 19	......	2	...	63 49 51·25	19·19
548	B.A.C. 3759 ...	8·0	2	·22	10 52 26·69	3·144	2	·22	79 20 27·45	19·19
549	*d* Leonis	...	6	·24	10 53 32·09	3·100	1	·24	85 39 10·66	19·22
550	Lalande 21127	7·9	2	·31	10 53 36·77	3·113	2	·31	83 45 33·70	19·22
551	B.A.C. 3774 ...	...	2	·29	10 54 13·85	3·843	2	·29	121 6 50·09	19·24
552	α Ursæ Majoris	...	3	·75	10 55 18·68	3·770*	8	·78	27 30 54·66	19·35*
553	Radcliffe 2594 .	...	...	...	10 55 25	......	3	·66	1 37 22·14	19·27
554	p^3 Leonis	...	1	·32	10 56 39·02	3·075	1	·32	89 16 10·57	19·30
555	B.A.C. 3785 ...	...	1	·19	10 56 58·25	3·098	1	·19	85 37 46·11	19·30
556	B.A.C. 3786 ...	...	2	·24	10 57 22·10	3·068	2	·24	90 32 43·68	19·31
557	Rad. 2612, S.P.	...	...	...	10 57 30	......	2	·77	3 37 22·67	19·32
558	χ Leonis	...	4	·28	10 58 0·06	3·099*	2	·27	81 55 46·27	19·40*
559	B.A.C. 3795 ...	7·4	4	·21	10 59 36·01	3·086	4	·21	87 23 6·03	19·37
560	52 Leonis Min.	6·5	2	·26	10 59 46·04	+3·242	2	·26	63 43 39·49	+19·37

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					h. m. s.	s.			° ′ ″	″
561	p^3 Leonis	6·3	2	0·25	10 59 57·88	+3·087	2	0·25	87 18 24·02	+19·37
562	B.A.C. 3799 ...	...	2	·30	11 0 5·66	2·887	2	·30	117 59 34·06	19·38
563	B.A.C. 3808 ...	...	1	·35	11 1 29·41	3·180	1	·35	72 3 27·73	19·41
564	B.A.C. 3811 ...	6·5	2	·30	11 1 49·75	3·324	2	·30	52 57 13·23	19·42
565	p^4 Leonis	7·3	2	·22	11 2 17·29	3·068	2	·22	90 35 48·40	19·43
566	B.A.C. 3823 ...	...	2	·27	11 3 24·98	2·890	2	·27	119 3 26·34	19·44
567	B.A.C. 3824 ...	...	1	·28	11 4 35·55	3·157	1	·28	74 51 41·38	19·47
568	B.A.C. 3828 ...	...	1	·33	11 5 21·78	2·916	1	·33	116 4 7·78	19·49
569	δ Leonis	...	1	·37	11 6 52·36	3·203*	...	...	68 44	......
570	W.B. (1) xi. 100	8·0	2	·25	11 7 35·46	3·143	2	·25	76 38 15·21	19·53
571	B.A.C. 3844 ...	7·4	2	·30	11 8 49·93	3·141	2	·30	76 38 42·20	19·55
572	B.A.C. 3845 ...	6·7	1	·21	11 8 51·61	3·143	1	·21	76 24 42·98	19·55
573	φ Leonis	...	1	·30	11 9 44·90	3·056	1	·30	92 54 32·36	19·57
574	W.B. (1) xi. 148	7·0	1	·21	11 10 4·76	3·039	1	·21	96 23 36·36	19·58
575	W.B. (1) xi. 161	...	1	·21	11 10 36·58	3·138	1	·21	76 51 23·10	19·59
576	B.A.C. 3854 ...	7·0	2	·27	11 11 15·24	3·135	2	·27	77 16 15·13	19·60
577	76 Leonis	...	1	·19	11 11 56·28	3·082	1	·19	87 36 17·01	19·61
578	δ Crateris	...	7	·31	11 12 32·59	2·995*	3	·29	104 2 34·56	19·45*
579	71 Leonis	7·5	3	·25	11 15 21·93	3·155	3	·25	71 49 0·97	19·67
580	B.A.C. 3871 ...	7·3	3	·30	11 16 13·52	3·103	3	·30	82 40 5·78	19·69
581	B.A.C. 3873 ...	7·5	1	·31	11 16 19·96	3·075	1	·31	89 7 19·25	19·69
582	B.A.C. 3884 ...	7·0	2	·25	11 18 10·20	3·098	2	·25	83 30 46·48	19·72
583	81 Leonis	6·5	2	·31	11 18 30·84	3·145	2	·31	72 47 46·57	19·73
584	82 Leonis	...	1	·25	11 18 40·03	3·087	1	·21	85 57 0·55	19·73
585	Piazzi xi. 66 ...	7·9	1	·21	11 18 41·12	3·098	2	·21	83 30 14·25	19·73
586	τ Leonis	...	3	·30	11 20 56·51	3·085	2	·29	86 23 42·82	19·76
587	B.A.C. 3904 ...	...	...	...	11 21 17	......	2	·24	27 28 53·41	19·77
588	B.A.C. 3909 ...	...	1	·24	11 22 27·13	3·071	1	·24	90 6 2·57	19·79
589	85 Leonis	...	1	·35	11 22 36·50	3·133	1	·35	73 50 9·18	19·79
590	Rad. 2705, S.P.	...	...	...	11 24 42	......	1	·75	3 37 56·22	19·82
591	B.A.C. 3926 ...	...	2	·30	11 26 10·84	2·956	2	·30	120 20 14·21	19·84
592	B.A.C. 3937 ...	...	1	·21	11 29 8·21	3·168	1	·21	61 28 2·62	19·88
593	B.A.C. 3940 ...	7·3	3	·22	11 29 34·70	3·092	3	·22	83 8 14·15	19·88
594	υ Leonis	...	1	·35	11 29 59·11	3·069*	...	...	90 4	......
595	B.A.C. 3948 ...	...	1	·24	11 30 16·93	+2·961	1	·24	122 13 52·84	+19·89

No.	Name of Star.	Mag.	Number of Obs. of R.A.	Fraction of the Year for Mean.	Mean R.A. 1864, Jan. 1.	Precession in R.A.	Number of Obs. of N.P.D.	Fraction of the Year for Mean.	Mean N.P.D. 1864, Jan. 1.	Precession in N.P.D.
					h. m. s.	s.			° ′ ″	″
596	B.A.C. 3947 ...	7·5	1	0·31	11 30 17·91	+3·092	1	0·31	82 58 40·83	+19·89
597	ω Virginis	6·0	1	·21	11 31 26·64	3·097	1	·21	81 6 47·16	19·90
598	B.A.C. 3962 ...	7·5	1	·30	11 33 25·91	3·076	1	·30	88 17 41·72	19·92
599	B.A.C. 3970 ...	6·7	3	·27	11 35 2·32	3·105	3	·27	76 57 21·09	19·94
600	B.A.C. 3971 ...	7·7	2	·27	11 35 10·03	3·084	2	·27	84 30 0·55	19·94
601	B.A.C. 3975 ...	...	1	·23	11 36 58·40	3·056	1	·23	95 55 12·79	19·96
602	Rad. 2738, S.P.	8·0	...	...	11 37 11	......	1	·75	3 42 46·13	19·96
603	β Leonis	...	4	·36	11 42 7·21	3·065*	4	·28	74 40 2·55	20·10*
604	B.A.C. 3996 ...	...	1	·25	11 42 8·96	3·081	1	·25	84 3 18·38	19·99
605	β Virginis......	...	2	·30	11 43 36·66	3·075	2	·30	87 28 10·50	20·00
606	B.A.C. 4003 ...	...	1	·28	11 43 45·39	3·024	1	·28	116 31 18·76	20·00
607	B.A.C. 4005 ...	6·7	3	·26	11 43 56·44	3·092	5	·28	76 57 56·57	20·01
608	B.A.C. 4014 ...	7·5	1	·28	11 45 45·60	3·095	1	·28	73 48 17·38	20·02
609	γ Ursæ Majoris	...	5	·66	11 46 39·79	3·192*	10	·69	35 32 55·92	20·03*
610	B.A.C. 4019 ...	...	1	·35	11 46 52·37	3·073	1	·35	88 41 31·25	20·02
611	A² Virginis ...	...	1	·22	11 48 4·75	3·082	1	·22	80 47 58·89	20·03
612	B.A.C. 4029 ...	7·3	1	·25	11 48 26·57	3·073	1	·25	88 8 45·81	20·03
613	B.A.C. 4032 ...	...	2	·27	11 48 45·55	3·036	2	·27	117 43 8·18	20·03
614	B.A.C. 4042 ...	...	1	·30	11 51 58·58	3·049	1	·30	115 9 3·79	20·04
615	31 Crateris ...	...	1	·23	11 53 54·00	3·058	1	·23	108 54 7·89	20·05
616	π Virginis......	...	4	·30	11 53 54·20	3·075	2	·26	82 37 37·04	20·05
617	1 Comæ.........	...	1	·24	11 54 46·14	3·083	1	·24	67 8 51·81	20·05
618	2 Comæ.........	6·7	2	·29	11 57 18·56	3·077	2	·29	67 46 59·74	20·05
619	B.A.C. 4069 ...	7·5	1	·28	11 57 45·27	3·072	2	·33	85 40 5·98	20·05
620	Groombr. 1850	...	...	...	11 57 52	......	2	·59	3 39 33·60	20·05
621	Groombr. 1852	...	...	...	11 58 17	......	2	·31	12 20 1·46	20·06
622	B.A.C. 4077 ...	6·5	2	·30	11 59 2·22	3·070	2	·30	92 22 25·92	20·06
623	B.A.C. 4083 ...	7·3	2	·25	12 1 2·89	3·071	2	·25	88 37 13·80	20·06
624	10 Virginis ...	7·0	2	·30	12 2 43·26	3·070	2	·30	87 20 18·52	20·05
625	ε Corvi	...	2	·38	12 3 8·04	3·075*	1	·38	111 51 48·86	20·05*
626	3 Comæ.........	...	2	·23	12 3 35·75	3·064	2	·23	72 26 1·15	20·05
627	12 Virginis ...	6·3	1	·28	12 6 30·63	3·063	1	·28	78 58 50·48	20·05
628	B.A.C. 4116 ...	...	3	·31	12 6 59·03	3·069	3	·31	86 58 57·40	20·05
629	Lalande 23040	...	1	·28	12 11 10·22	3·048	1	·28	70 48 32·26	20·03
630	B.A.C. 4134 (1)	...	1	·29	12 11 10·68	+3·074	1	·29	93 11 59·05	+20·03

No.	Name of Star.	Mag.	Number of Obs. of R.A.	Fraction of the Year for Mean.	Mean R.A. 1854, Jan. 1.	Precession in R.A.	Number of Obs. of N.P.D.	Fraction of the Year for Mean.	Mean N.P.D. 1864, Jan. 1.	Precession in N.P.D.
					h. m. s.	s.			° ′ ″	″
631	B.A.C. 4134 (2)	...	1	0·29	12 11 11·10	+3·074	1	0·29	93 11 38·39	+20·03
632	B.A.C. 4136 ...	7·5	2	·31	12 11 32·76	3·081	2	·31	98 8 44·59	20·03
633	13 Virginis ...	...	1	·22	12 11 42·36	3·071	1	·22	90 1 51·65	20·03
634	W.B.(1) xii. 172	7·3	1	·28	12 12 0·13	3·087	1	·28	102 47 9·41	20·03
635	14 Virginis ...	...	1	·24	12 12 20·34	3·081	1	·24	98 9 29·04	20·03
636	B.A.C. 4150 / Groom. 1871	...	1	·30	12 12 48·18	1·550	7	·57	2 48 28·42	20·02
637	η Virginis	...	1	·30	12 12 56·88	3·065*	1	·30	89 54 40·03	20·06*
638	B.A.C. 4149 ...	...	1	·31	12 13 8·80	3·101	1	·31	111 25 11·32	20·03
639	ζ Corvi	...	1	·25	12 13 31·55	3·102	1	·25	111 27 35·93	20·02
640	B.A.C. 4157 ...	6·0	2	·29	12 13 54·66	3·089	2	·29	102 48 40·23	20·02
641	B.A.C. 4171 ...	...	1	·23	12 16 9·66	3·082	2	·27	96 32 40·95	20·00
642	B.A.C. 4178 ...	...	...	...	12 17 14	......	2	·31	63 23 38·19	20·00
643	B.A.C. 4192 ...	...	1	·28	12 19 41·99	3·143	2	·29	122 4 31·56	19·98
644	B.A.C. 4204 ...	7·2	2	·19	12 21 22·48	3·060	3	·27	84 51 0·40	19·97
645	δ Corvi	...	3	·31	12 22 49·84	3·108	1	·28	105 45 28·79	19·95
646	B.A.C. 4220 ...	...	1	·23	12 23 51·52	3·078	1	·23	93 18 35·15	19·94
647	21 Comæ	6·5	1	·30	12 24 12·89	3·004	1	·30	64 40 51·25	19·94
648	B.A.C. 4231 ...	...	1	·37	12 26 45·33	2·997	1	·37	64 48 2·30	19·92
649	q Virginis	...	1	·38	12 26 45·53	3·095	1	·22	98 42 4·15	19·92
650	B.A.C. 4233 ...	...	1	·38	12 26 56·74	2·965	1	·38	56 0 0·37	19·92
651	β Corvi	...	2	·29	12 27 14·82	3·131*	2	·29	112 38 38·88	19·98*
652	κ Draconis, S.P.	...	...	...	12 27 40	......	2	·88	19 27 40·62	19·91
653	24 Comæ (1)...	...	1	·29	12 28 16·97	3·014	1	·29	70 52 25·14	19·90
654	24 Comæ (2)...	...	1	·29	12 28 18·56	3·014	...	...	70 52	......
655	25 Comæ	6·0	3	·24	12 30 9·11	3·014	3	·24	72 9 37·76	19·88
656	B.A.C. 4255 ...	...	1	·36	12 31 43·99	3·083	1	·36	93 37 29·59	19·86
657	χ Virginis......	6·0	3	·33	12 32 13·64	3·095	3	·33	97 14 48·43	19·86
658	27 Virginis ...	6·3	1	·25	12 34 43·51	3·030	1	·25	78 49 36·49	19·83
659	B.A.C. 4278 ...	...	2	·29	12 36 45·95	3·183	2	·29	117 34 38·25	19·80
660	Groombr. 1923	7·5	...	...	12 37 22	......	4	·72	5 36 33·89	19·79
661	d^2 Virginis ...	6·0	3	·27	12 38 44·82	3·038	3	·27	81 34 56·81	19·77
662	B.A.C. 4291 ...	...	2	·32	12 40 7·89	3·043	2	·32	83 18 14·67	19·75
663	34 Virginis ...	...	1	·24	12 40 22·93	3·017	1	·24	77 17 52·62	19·74
664	35 Virginis ...	...	6	·35	12 40 55·97	3·053	2	·27	85 41 2·88	19·74
665	B.A.C. 4297 ...	...	1	·37	12 41 11·74	+3·192	1	·37	116 51 6·31	+19·73

No.	Name of Star.	Mag.	Number of Obs. of R.A.	Fraction of the Year for Mean.	Mean R.A. 1864, Jan. 1.	Precession in R.A.	Number of Obs. of N.P.D.	Fraction of the Year for Mean.	Mean N.P.D. 1864, Jan. 1.	Precession in N.P.D.
					h. m. s.	s.			° ′ ″	″
666	7 Draconis......	...	...	...	12 42 1	......	1	0·30	22 27 58·30	+19·72
667	B.A.C. 4310 ...	...	1	0·30	12 43 26·65	+3·040	1	·30	83 1 50·91	19·70
668	39 Virginis ...	7·0	2	·30	12 46 32·85	3·110	2	·30	98 19 25·07	19·65
669	41 Virginis ...	...	1	·25	12 47 0·40	3·007	1	·25	76 50 29·66	19·64
670	ψ Virginis......	6·0	3	·20	12 47 16·93	3·113	2	·30	98 47 59·60	19·63
671	Gr. 1940, S.P..	...	...	...	12 48 10	......	1	·93	5 50 52·56	19·62
672	B.A.C. 4336 ...	9·0	2	·28	12 48 18·18	3·028	2	·28	81 22 35·25	19·61
673	B.A.C. 4337 ...	7·2	3	·29	12 48 22·84	3·089	3	·29	93 46 7·35	19·61
674	δ Virginis	...	1	·41	12 48 45·35	3·050	...	...	85 52	......
675	46 Virginis ...	...	1	·24	12 53 35·92	3·085	1	·24	92 38 11·97	19·51
676	ε Virginis	...	3	·41	12 55 24·39	3·005	2	·41	78 18 33·95	19·47
677	40 Comæ	...	1	·39	12 59 45·27	2·922	1	·39	66 39 13·31	19·37
678	B.A.C. 4392 ...	...	...	...	13 1 0	......	2	·32	27 13 41·32	19·35
679	B.A.C. 4394 ...	6·0	3	·32	13 1 27·08	3·122	2	·33	98 15 19·32	19·34
680	50 Virginis ...	...	3	·33	13 2 38·44	3·132	3	·33	99 36 12·34	19·31
681	θ Virginis	...	4	·39	13 2 54·74	3·098*	1	·39	94 48 41·89	19·34*
682	B.A.C. 4431 ...	...	2	·37	13 7 1·80	3·056	2	·37	87 49 12·33	19·20
683	56 Virginis ...	...	1	·40	13 7 37·35	3·137	1	·40	99 38 53·50	19·19
684	B.A.C. 4437 ...	5·0	1	·31	13 9 20·17	3·308	1	·31	120 47 5·79	19·14
685	B.A.C. 4441 ...	7·0	2	·24	13 10 18·51	3·178	2	·24	104 49 38·48	19·12
686	58 Virginis ...	...	1	·22	13 10 19·81	3·140	1	·22	99 49 49·12	19·12
687	Gr. 2006, S.P..	...	...	...	13 10 27	......	1	·91	1 37 15·42	19·11
688	σ Virginis......	6·0	1	·38	13 10 44·31	3·027	1	·38	83 48 46·16	19·11
689	B.A.C. 4455 ...	...	1	·39	13 12 34·40	3·151	2	·36	100 57 23·11	19·06
690	B.A.C. 4471 ...	...	1	·00	13 14 57·09	3·160	1	·00	101 51 56·58	18·99
691	63 Virginis ...	...	1	·24	13 15 44·49	3·204	...	...	107 1	......
692	Spica............	...	12	·37	13 18 1·90	3·150*	6	·40	100 27 2·77	18·94*
693	B.A.C. 4488 ...	...	2	·29	13 18 49·28	3·201	3	·28	106 9 6·65	18·88
694	Gr. 2007, S.P..	...	...	...	13 20 16	......	1	·95	4 32 2·25	18·84
695	B.A.C. 4503 ...	7·7	2	·35	13 22 20·59	3·033	3	·34	85 25 25·56	18·78
696	71 Virginis ...	...	2	·33	13 22 28·67	2·975	2	·33	78 28 31·02	18·77
697	B.A.C. 4511 ...	...	2	·20	13 23 50·39	3·090	2	·20	92 20 51·94	18·73
698	Lalande 25006	...	1	·41	13 24 20·32	2·847	1	·41	65 3 50·97	18·71
699	B.A.C. 4513 ...	...	1	·41	13 24 25·23	2·847	1	·41	65 3 35·05	18·71
700	73 Virginis ...	...	2	·31	13 24 43·42	+3·228	2	·31	108 1 36·33	+18·70

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					h. m. s.	s.			° ′ ″	″
701	*k* Virginis	...	2	0·30	13 25 48·41	+3·152	2	0·30	99 27 48·51	+18·67
702	B.A.C. 4527 ...	...	...	...	13 25 50	......	4	·32	10 39 13·69	18·67
703	W.B.(1)xiii.440	7·7	1	·29	13 27 14·18	3·182	1	·29	102 38 53·89	18·62
704	ζ Virginis	...	10	·32	13 27 45·88	3·052*	2	·15	89 53 57·77	18·54*
705	80 Virginis ...	...	1	·42	13 28 26·84	3·112	1	·42	94 42 10·29	18·58
706	B.A.C. 4554 ...	...	1	·28	13 32 4·18	3·177	1	·28	101 23 57·28	18·46
707	B.A.C. 4559 ...	...	2	·32	13 32 52·29	2·964	2	·32	78 33 42·03	18·43
708	*m* Virginis......	...	2	·37	13 34 28·48	3·146	...	...	98 1	......
709	Radcliffe 3075 .	8·0	...	...	13 35 2	......	2	·63	4 1 49·54	18·35
710	B.A.C. 4572 ...	...	1	·40	13 36 49·81	3·117	1	·40	94 48 45·27	18·29
711	83 Virginis ...	...	2	·43	13 37 9·68	3·223	2	·43	105 29 38·10	18·28
712	B.A.C. 4576 ...	7·0	1	·29	13 37 27·44	3·204	1	·29	103 32 4·71	18·27
713	B.A.C. 4578 ...	...	1	·41	13 37 59·38	3·138	1	·41	96 57 2·92	18·25
714	B.A.C. 4593 ...	...	1	·39	13 40 19·02	3·130	1	·39	96 1 28·60	18·17
715	τ Boötis.........	...	3	·32	13 40 47·91	2·885	2	·34	71 51 48·51	18·15
716	89 Virginis ...	...	1	·28	13 42 29·09	3·252	1	·28	107 27 21·04	18·08
717	B.A.C. 4621 ...	...	1	·33	13 43 37·91	2·866	1	·33	70 41 38·11	18·04
718	B.A.C. 4632 ...	...	1	·29	13 45 47·26	2·652	1	·29	54 52 52·26	17·96
719	B.A.C. 4639 ...	...	2	·15	13 46 58·27	3·249	2	·15	106 30 33·09	17·91
720	B.A.C. 4640 ...	...	...	...	13 47 1	......	2	·30	60 40 51·88	17·91
721	η Boötis	...	6	·41	13 48 12·59	2·858*	5	·31	70 55 8·51	18·21*
722	92 Virginis ...	...	1	·30	13 49 32·24	3·053	1	·30	88 16 58·00	17·81
723	47 Hydræ	...	1	·37	13 50 53·73	3·352	1	·37	114 18 25·06	17·75
724	B.A.C. 4662 ...	6·3	1	·33	13 52 6·13	2·899	1	·33	74 41 4·56	17·71
725	10 Boötis	...	2	·35	13 52 16·56	2·811	2	·35	67 38 19·26	17·70
726	B.A.C. 4665 ...	...	1	·43	13 52 46·49	3·103	1	·43	92 53 7·96	17·68
727	W.B.(1)xiii.904	8·7	1	·35	13 53 22·13	3·157	1	·35	97 41 8·24	17·65
728	τ Virginis	...	6	·38	13 54 43·63	3·047*	1	·44	87 47 43·95	17·66*
729	11 Boötis	...	...	...	13 55 0	......	2	·30	61 57 17·87	17·58
730	B.A.C. 4680 ...	...	1	·31	13 57 9·44	3·169	2	·32	98 36 11·06	17·49
731	B.A.C. 4683 ...	...	1	·30	13 57 52·03	3·237	1	·30	104 12 7·43	17·46
732	B.A.C. 4694 ...	7·3	3	·33	14 0 24·30	2·660	3	·33	58 29 54·42	17·35
733	B.A.C. 4697 ...	...	1	·28	14 1 11·87	3·204	1	·28	101 10 53·20	17·32
734	B.A.C. 4702 ...	...	2	·38	14 3 50·30	+3·209	2	·38	101 18 30·00	17·20
735	Groombr. 2099	...	...	...	14 3 56	......	6	·33	3 35 28·88	+17·19

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					h. m. s.	s.			° ′ ″	″
736	B.A.C. 4714 ...	...	1	·43	14 5 19·06	+2·620	1	0·43	57 3 47·72	+17·13
737	B.A.C. 4713 ...	...	1	·30	14 5 22·77	3·034	1	·30	86 56 56·51	17·13
738	κ Virginis	...	5	·35	14 5 38·58	3·189	4	·34	99 38 21·18	17·12
739	3 Ursæ Minoris	...	...	...	14 5 54	......	2	·29	14 45 41·42	17·11
740	Arcturus	...	4	·37	14 9 27·65	2·734*	3	·49	70 6 28·53	18·92*
741	B.A.C. 4739 ...	...	1	·43	14 11 7·33	3·307	1	·43	108 5 4·24	16·86
742	λ Virginis	...	5	·36	14 11 45·20	3·235	5	·36	102 44 36·67	16·83
743	B.A.C. 4750 ...	7·0	2	·36	14 12 44·59	3·149	2	·36	96 7 5·98	16·78
744	υ^2 Virginis	...	2	·37	14 14 58·16	3·088	2	·37	91 21 51·47	16·68
745	B.A.C. 4764 (1)	...	1	·30	14 15 27·34	3·164	1	·30	97 8 30·35	16·66
746	B.A.C. 4764 (2)	...	1	·30	14 15 27·41	3·164	1	·30	97 8 34·52	16·66
747	2 Libræ	...	3	·38	14 16 6·81	3·218	4	·36	101 5 28·48	16·62
748	B.A.C. 4771 ...	...	3	·37	14 17 18·71	2·953	3	·37	81 8 11·01	16·56
749	B.A.C. 4777 ...	...	1	·42	14 17 55·60	3·242	1	·42	102 44 12·19	16·54
750	*f* Boötis	...	4	·30	14 20 7·94	2·794	1	·29	70 9 36·74	16·42
751	106 Virginis ...	6·0	2	·30	14 21 31·54	3·156	2	·30	96 17 19·07	16·35
752	B.A.C. 4798 ...	...	1	·43	14 22 54·41	3·051	1	·43	88 33 47·50	16·28
753	B.A.C. 4800 ...	...	1	·30	14 23 12·08	3·431	1	·30	114 42 30·49	16·27
754	B.A.C. 4803 ...	...	2	·39	14 24 0·02	2·572	2	·39	57 36 7·47	16·23
755	ρ Boötis	...	5	·45	14 25 58·06	2·587*	4	·38	59 1 47·39	15·99*
756	B.A.C. 4814 ...	...	1	·42	14 27 11·73	3·359	1	·42	109 50 26·16	16·06
757	B.A.C. 4824 ...	...	1	·41	14 29 2·22	3·199	1	·41	99 0 59·84	15·96
758	B.A.C. 4825 ...	...	1	·30	14 29 4·95	2·455	...	...	52 46	......
759	3 Libræ	...	2	·44	14 31 31·19	3·444	2	·44	114 26 16·32	15·83
760	B.A.C. 4838 ...	...	2	·30	14 31 45·85	3·474	2	·30	116 8 1·85	15·82
761	B.A.C. 4840 ...	...	2	·31	14 33 2·66	3·431	2	·31	113 28 15·18	15·75
762	B.A.C. 4857 ...	...	2	·39	14 36 28·22	3·439	2	·39	113 33 1·93	15·56
763	B.A.C. 4863 ...	...	3	·43	14 37 9·40	2·424	2	·43	52 39 45·09	15·52
764	5 Libræ	...	2	·41	14 38 27·90	3·297	2	·41	104 53 4·84	15·45
765	ε Boötis	...	4	·36	14 39 2·87	2·619*	6	·38	62 21 2·69	15·41*
766	B.A.C. 4886 ...	7·3	1	·30	14 40 32·98	3·032	1	·30	87 23 29·56	15·33
767	B.A.C. 4888 ...	...	2	·30	14 41 27·63	3·451	2	·30	113 40 59·66	15·28
768	α Libræ	...	8	·36	14 43 21·51	3·305*	6	·35	105 28 29·00	15·23*
769	10 Libræ	...	1	·43	14 44 13·85	3·352	1	·43	107 47 34·00	15·12
770	12 Libræ	6·0	3	·38	14 46 26·57	+3·468	3	·38	114 5 2·10	+14·99

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					h. m. s.	s.			° ′ ″	″
771	ξ^1 Libræ	...	2	0·36	14 46 59·91	+3·250	2	0·36	101 20 29·02	+14·97
772	ξ^2 Libræ	...	6	·31	14 49 23·59	3·244	1	·30	100 51 31·93	14·82
773	14 Libræ	...	1	·42	14 49 34·84	3·489	1	·42	114 53 30·82	14·81
774	B.A.C. 4926 ...	...	1	·41	14 49 48·24	+2·829	1	·41	75 0 7·95	14·80
775	β Ursæ Minoris	...	2	·91	14 51 8·07	−0·255*	10	·59	15 17 19·10	14·76*
776	B.A.C. 4941 ...	...	2	·39	14 54 16·09	+3·106	2	·39	92 12 49·85	14·53
777	B.A.C. 4945 ...	...	2	·40	14 54 54·44	+3·184	2	·40	97 2 10·99	14·49
778	Groombr. 2210	7·5	1	·00	14 56 39·06	−12·204	7	·38	3 29 27·64	14·39
779	ψ Boötis	...	5	·40	14 58 37·07	+2·570*	2	·44	62 31 11·89	14·26*
780	B.A.C. 4997 ...	...	2	·36	15 4 29·07	3·395	2	·36	108 35 25·56	13·90
781	B.A.C. 4998 ...	...	1	·40	15 5 20·85	3·492	1	·40	113 30 38·59	13·85
782	Groombr. 2213	...	...	...	15 5 44	......	2	·39	5 31 26·29	13·82
783	4 Serpentis ...	...	1	·36	15 8 53·83	3·056	1	·36	89 7 20·06	13·62
784	β Libræ	...	3	·25	15 9 41·49	3·218*	...	...	98 53	......
785	Rad. 3362, S.P.	...	...	...	15 12 53	......	1	·00	3 58 19·60	13·36
786	o^2 Libræ	...	3	·34	15 15 26·99	3·334	2	·42	104 38 47·50	13·19
787	τ^1 Serpentis ...	4·7	2	·41	15 19 28·94	2·779	2	·41	74 5 31·27	12·93
788	ζ^1 Libræ	...	3	·47	15 20 35·42	3·370	2	·47	106 14 23·44	12·85
789	B.A.C. 5090 ...	...	1	·45	15 20 43·62	3·626	1	·45	118 23 23·76	12·84
790	B.A.C. 5109 ...	...	1	·41	15 24 48·14	3·434	1	·41	109 12 15·18	12·56
791	11 Serpentis ...	...	1	·47	15 25 57·87	3·084	1	·47	90 43 20·05	12·49
792	B.A.C. 5126 ...	...	1	·45	15 26 48·54	2·760	1	·45	73 31 31·82	12·42
793	γ Libræ.........	...	2	·38	15 27 55·20	3·340	2	·38	104 19 59·45	12·35
794	α Coronæ	...	5	·45	15 28 55·83	2·538*	5	·45	62 49 32·45	12·35*
795	B.A.C. 5167 ...	...	1	·45	15 33 12·82	3·662	1	·45	118 51 28·78	11·98
796	κ Libræ.........	...	3	·37	15 34 6·88	3·446	3	·37	109 14 7·76	11·92
797	τ^6 Serpentis ...	...	1	·47	15 34 44·11	2·752	1	·47	73 32 5·66	11·88
798	χ Serpentis ...	...	1	·38	15 35 23·48	2·815	1	·38	76 42 49·78	11·83
799	θ Ursæ Minoris	...	...	...	15 35 31	......	4	·42	12 11 59·53	11·82
800	τ^7 Serpentis ...	...	1	·49	15 35 47·69	2·700	1	·49	71 6 2·55	11·80
801	α Serpentis ...	...	6	·46	15 37 34·23	2·949*	3	·44	83 8 39·24	11·62*
802	τ^8 Serpentis ...	...	1	·35	15 38 31·50	2·723	1	·35	72 18 21·52	11·60
803	A^2 Serpentis ...	...	1	·45	15 39 3·64	3·097	1	·45	91 22 32·29	11·57
804	ω Serpentis ...	...	1	·45	15 43 25·64	3·020	1	·45	87 23 10·02	11·25
805	ϵ Serpentis ...	...	2	·41	15 44 2·27	+2·976	1	·41	85 6 37·46	+11·21

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					h. m. s.	s.			° ′ ″	″
806	θ Libræ.........	...	1	0·39	15 46 4·99	+3·398	1	0·39	106 19 40·32	+11·06
807	B.A.C. 5258 ...	6·5	2	·37	15 46 13·57	+3·637	2	·37	116 55 55·33	11·05
808	Radcliffe 3475 .	...	...	...	15 48 40	......	2	·28	4 43 57·49	10·87
809	ζ Ursæ Minoris	...	3	·93	15 48 59·38	—2·301*	8	·68	11 47 19·72	10·85*
810	γ Serpentis ...	...	1	·61	15 50 10·41	+2·744	4	·42	73 53 33·74	10·76
811	δ Scorpii	...	1	·50	15 52 17·70	3·534	1	·49	112 13 52·97	10·61
812	50 Libræ	...	1	·35	15 53 27·08	3·231	1	·35	98 1 27·48	10·52
813	β¹ Scorpii......	...	1	·39	15 57 32·09	3·477*	...	...	109 26	......
814	11 Scorpii......	...	1	·39	16 0 3·34	3·324	1	·39	102 22 38·50	10·02
815	B.A.C. 5354 ...	...	1	·40	16 0 36·45	3·571	1	·40	113 19 8·86	9·98
816	c¹ Scorpii	...	1	·42	16 3 51·96	3·693	1	·42	118 3 38·65	9·74
817	Radcliffe 3523 .	...	...	...	16 4 43	......	3	·18	4 18 46·98	9·67
818	Radcliffe 3522 .	...	...	...	16 5 48	......	1	·46	5 59 37·92	9·58
819	B.A.C. 5408 ...	...	1	·44	16 6 48·65	3·458	1	·44	108 11 2·07	9·51
820	δ Ophiuchi ...	...	7	·41	16 7 13·17	3·136*	3	·43	93 20 30·37	9·60*
821	B.A.C. 5436 ...	7·0	2	·43	16 11 10·03	3·501	2	·43	109 53 0·06	9·17
822	19 Ursæ Min. .	...	...	...	16 14 43	......	3	·44	13 46 52·54	8·89
823	γ Herculis......	...	5	·49	16 15 55·33	2·646	...	...	70 31	......
824	B.A.C. 5464 ...	...	1	·44	16 16 7·52	3·747	1	·44	119 23 4·93	8·78
825	* (North) ...	...	1	·51	16 17 25·69	3·585	1	·51	113 7 47·05	8·67
826	* (South) ...	...	1	·51	16 17 25·69	3·585	1	·51	113 7 53·51	8·67
827	B.A.C. 5478 ...	...	1	·51	16 17 26·13	3·585	1	·51	113 5 18·89	8·67
828	23 Herculis ...	...	1	·46	16 17 43·27	2·298	1	·46	57 20 51·74	8·65
829	Antares	...	5	·49	16 21 4·31	3·666*	2	·50	116 7 37·00	8·42*
830	λ Ophiuchi ...	...	4	·39	16 24 3·29	3·022	...	...	87 43	......
831	B.A.C. 5537 ...	...	1	·46	16 27 7·12	2·839	1	·46	79 20 28·47	7·91
832	32 Herculis ...	...	1	·43	16 28 11·06	2·337	1	·43	59 12 48·66	7·83
833	ζ Ophiuchi ...	...	8	·46	16 29 40·41	3·295	...	...	100 17	......
834	33 Herculis ...	...	1	·53	16 30 15·37	2·910	1	·53	82 36 47·74	7·65
835	B.A.C. 5563 ...	...	1	·47	16 31 31·98	2·762	1	·47	76 2 6·86	7·55
836	B.A.C. 5567 ...	...	1	·53	16 32 33·69	3·525	1	·53	110 8 23·56	7·47
837	B.A.C. 5587 ...	...	1	·42	16 34 31·43	2·791	1	·42	77 20 17·16	7·30
838	B.A.C. 5597 ...	...	...	...	16 35 23	......	4	·44	64 52 35·95	7·24
839	B.A.C. 5600 ...	7·0	2	·48	16 35 51·23	3·712	2	·48	117 11 48·81	7·20
840	ζ Herculis......	...	3	·53	16 36 9·63	+2·262*	2	·45	58 8 57·37	+ 6·73*

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					h. m. s.	s.			° ′ ″	″
841	B.A.C. 5619 ...	...	1	0·46	16 38 50·82	+2·215	1	0·46	55 42 31·45	+ 6·96
842	B.A.C. 5620 ...	...	1	·53	16 39 13·06	2·711	1	·53	74 0 1·86	6·92
843	*l* Herculis	...	1	·51	16 41 4·72	2·949	1	·51	84 30 23·79	6·77
844	B.A.C. 5634 ...	...	1	·55	16 41 42·38	2·817	1	·55	78 37 27·96	6·72
845	B.A.C. 5641 ...	...	1	·51	16 43 3·66	3·648	1	·51	114 35 49·62	6·61
846	B.A.C. 5642 ...	...	1	·42	16 43 6·36	3·440	1	·42	106 18 34·40	6·61
847	B.A.C. 5647 ...	...	1	·44	16 43 17·95	2·767	1	·44	76 29 53·16	6·59
848	48 Herculis ...	6·0	1	·43	16 43 57·90	2·335	1	·43	69 47 59·41	6·53
849	B.A.C. 5663 ...	...	2	·51	16 45 23·62	3·536	2	·51	110 11 6·44	6·41
850	B.A.C. 5671 ...	...	1	·53	16 45 55·57	3·814	1	·53	120 21 38·34	6·37
851	51 Herculis ...	...	2	·53	16 46 7·04	2·482	2	·53	65 6 46·77	6·35
852	B.A.C. 5687 ...	...	1	·45	16 47 23·59	3·671	1	·45	115 18 38·80	6·25
853	B.A.C. 5695 ...	...	1	·46	16 48 10·99	3·449	1	·46	106 35 12·32	6·18
854	24 Ophiuchi ...	...	1	·53	16 48 36·03	3·609	1	·53	112 55 50·43	6·15
855	κ Ophiuchi ...	...	4	·51	16 51 13·91	2·834*	1	·44	80 24 39·15	5·90*
856	57 Herculis ...	...	1	·44	16 51 56·02	2·459	1	·44	64 26 4·39	5·87
857	B.A.C. 5716 ...	7·0	1	·43	16 52 28·55	2·712	1	·43	74 20 26·09	5·83
858	ε Herculis......	...	3	·53	16 55 5·13	2·295	...	...	58 52	......
859	B.A.C. 5730 ...	...	1	·51	16 55 13·49	3·643	1	·51	114 2 35·36	5·59
860	B.A.C. 5737 ...	...	2	·47	16 55 53·82	3·764	2	·47	118 22 36·29	5·54
861	B.A.C. 5758 ...	...	1	·45	16 58 4·69	3·575	1	·45	111 22 21·28	5·35
862	B.A.C. 5759 ...	...	1	·53	16 58 27·49	3·708	1	·53	116 19 32·31	5·32
863	B.A.C. 5767 ...	...	1	·44	16 59 36·19	3·667	1	·44	114 48 51·72	5·23
864	ε Ursæ Minoris	...	...	...	17 0 2	......	2	·45	7 44 40·15	5·19*
865	B.A.C. 5774 ...	...	1	·53	17 1 12·75	3·090	1	·53	90 53 48·50	5·09
866	η Ophiuchi ...	...	6	·57	17 2 34·82	3·431	2	·64	105 33 12·02	4·97
867	Radcliffe 3685 .	8·0	...	...	17 5 37	......	4	·39	5 7 3·40	4·72
868	α Herculis......	...	6	·45	17 8 26·81	2·732*	1	·55	75 27 8·84	4·43*
869	38 Ophiuchi ...	...	1	·46	17 9 12·74	3·720	1	·46	116 28 30·53	4·41
870	B.A.C. 5838 ...	...	1	·53	17 11 50·21	3·802	1	·53	119 13 9·47	4·19
871	θ Ophiuchi ...	...	6	·53	17 13 39·60	3·676*	3	·58	114 51 38·27	4·01*
872	B.A.C. 5862 ...	...	1	·53	17 15 46·49	3·647	1	·53	113 42 42·65	3·84
873	*b* Ophiuchi ...	...	1	·62	17 18 3·87	3·657	1	·62	114 2 49·50	3·65
874	O.A. (SZ) 16772-3	...	1	·45	17 18 24·27	3·716	1	·45	116 12 31·97	3·62
875	B.A.C. 5878 ...	...	1	·55	17 18 30·32	+3·707	1	·55	115 49 10·34	+ 3·61

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					h. m. s.	s.			° ′ ″	″
876	B.A.C. 5880 ...	...	1	0·55	17 18 33·96	+3·585	1	0·55	111 20 45·97	+ 3·61
877	Lalande 31726	...	1	·46	17 19 5·53	2·895	1	·46	82 22 27·81	3·56
878	σ Ophiuchi ...	...	6	·52	17 19 46·03	2·972	2	·53	85 44 19·75	3·50
879	B.A.C. 5909 ...	...	1	·53	17 23 17·72	3·719	1	·53	116 9 37·39	3·20
880	B.A.C. 5920 ...	7·3	3	·49	17 25 4·34	3·485	3	·49	107 23 41·78	3·04
881	B.A.C. 5927 ...	...	1	·53	17 25 46·46	2·268	1	·53	58 44 18·22	2·98
882	78 Herculis ...	...	2	·57	17 26 29·14	2·352	2	·57	61 29 31·94	2·92
883	α Ophiuchi ...	...	4	·47	17 28 37·35	2·781*	2	·62	77 20 19·14	2·95*
884	56 Ophiuchi ...	...	2	·51	17 28 46·40	2·759	2	·51	76 46 11·39	2·72
885	B.A.C. 5985 ...	...	1	·55	17 34 54·42	2·922	1	·55	83 36 51·78	2·19
886	B.A.C. 5989 ...	...	1	·55	17 36 0·11	3·651	1	·55	113 36 45·18	2·09
887	β Ophiuchi ...	...	7	·50	17 36 45·27	2·963	2	·62	85 22 24·14	2·02
888	B.A.C. 6015 ...	7·0	2	·52	17 39 57·70	3·746	2	·52	116 55 23·14	1·75
889	μ Herculis......	...	5	·55	17 41 8·26	2·342*	2	·52	62 11 51·27	2·38*
890	B.A.C. 6023 ...	...	2	·56	17 41 38·41	3·668	2	·56	114 9 33·36	1·60
891	B.A.C. 6035 ...	...	1	·55	17 43 42·79	2·838	1	·55	80 6 25·37	1·42
892	B.A.C. 6041 ...	...	1	·61	17 44 18·41	3·532	1	·61	109 4 55·91	1·37
893	B.A.C. 6054 ...	...	2	·55	17 46 33·18	3·337	2	·55	101 18 20·92	1·17
894	B.A.C. 6060 ...	7·0	1	·55	17 47 55·05	3·524	1	·55	108 46 28·13	1·05
895	B.A.C. 6066 ...	...	1	·60	17 48 48·87	3·663	1	·60	113 54 58·44	0·98
896	B.A.C. 6069 ...	...	1	·53	17 49 22·61	3·054	1	·53	89 18 19·89	0·93
897	89 Herculis ...	...	6	·60	17 49 56·05	2·417	2	·62	63 55 34·33	0·88
898	B.A.C. 6075 ...	...	1	·51	17 50 34·54	3·822	1	·51	119 22 22·61	0·82
899	B.A.C. 6081 ...	...	1	·53	17 51 54·72	3·565	1	·53	110 19 33·80	0·71
900	γ Draconis, S.P.	...	...	...	17 53 27	......	3	·16	38 29 37·48	0·61*
901	B.A.C. 6099 ...	...	1	·53	17 54 47·61	3·630	1	·53	112 42 53·18	0·46
902	68 Ophiuchi ...	...	2	·55	17 54 51·22	3·040	2	·55	88 41 20·20	0·45
803	95 Herculis (1)	...	3	·56	17 55 43·79	2·541	3	·56	68 24 5·16	0·38
904	95 Herculis (2)	...	2	·59	17 55 44·33	2·541	2	·59	68 24 4·18	0·38
905	γ^1 Sagittarii ...	...	1	·51	17 56 20·17	3·829	1	·51	119 34 57·00	0·32
906	97 Herculis ...	...	1	·58	17 56 49·14	2·505	1	·58	67 4 31·68	0·28
907	B.A.C. 6127 ...	6·7	1	·66	17 59 28·34	3·796	1	·66	118 28 7·58	+ 0·04
908	B.A.C. 6137 ...	...	1	·53	18 0 30·85	3·013	1	·53	87 31 57·61	− 0·05
909	72 Ophiuchi ...	4·0	5	·61	18 0 54·13	2·846	5	·61	80 27 9·58	0·08
910	B.A.C. 6158 ...	7·0	1	·51	18 3 11·25	+3·554	1	·51	109 51 54·52	− 0·28

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					h. m. s.	s.			° ′ ″	″
911	B.A.C. 6161 ...	...	1	0·53	18 3 25·39	+3·658	1	0·53	113 43 32·12	− 0·30
912	μ Sagittarii ...	...	6	·61	18 5 37·81	3·584*	5	·61	111 5 28·30	0·49*
913	O.A.(S Z)17876	...	1	·66	18 6 22·99	3·836	1	·66	119 51 34·40	0·56
914	16 Sagittarii ...	...	2	·52	18 7 7·47	3·568	2	·52	110 25 28·84	0·62
915	17 Sagittarii ...	7·0	1	·62	18 8 29·16	3·573	1	·62	110 35 7·91	0·74
916	B.A.C. 6196 ...	...	1	·61	18 9 45·37	3·142	1	·61	93 2 29·59	0·86
917	B.A.C. 6210 ...	6·3	1	·51	18 12 19·04	3·451	1	·51	105 53 2·62	1·08
918	Rad. 3900, S.P.	...	...	...	18 13 38	......	1	·16	5 36 16·80	1·19
919	η Serpentis ...	...	2	·64	18 14 16·37	+3·139	2	·64	92 55 52·59	1·24
920	δ Ursæ Minoris	...	3	·66	18 16 13·42	−19·373*	31	·45	3 23 47·43	1·43*
921	21 Sagittarii ...	...	1	·62	18 17 14·94	+3·572	1	·62	110 36 39·74	1·51
922	B.A.C. 6260 ...	...	1	·62	18 19 7·76	3·837	1	·62	119 33 43·94	1·67
923	λ Sagittarii ...	...	3	·54	18 19 34·66	3·706	1	·54	115 29 33·48	1·71
924	B.A.C. 6294 ...	6·0	3	·60	18 23 28·20	3·516	3	·60	108 29 34·42	2·05
925	B.A.C. 6295 ...	...	1	·66	18 23 35·08	3·816	1	·66	119 16 58·92	2·06
926	O.A.(S Z)18344	...	1	·51	18 24 3·40	3·434	1	·51	105 16 29·61	2·10
927	B.A.C. 6301 ...	...	1	·67	18 24 29·10	3·530	1	·67	109 3 58·32	2·14
928	B.A.C. 6304 ...	...	1	·51	18 24 55·56	3·669	1	·51	114 12 18·34	2·18
929	24 Sagittarii ...	...	2	·61	18 25 34·99	3·666	2	·61	114 7 49·49	2·23
930	B.A.C. 6327 ...	...	1	·66	18 28 27·49	3·794	1	·66	118 36 59·46	2·49
931	α Lyræ	...	2	·64	18 32 20·11	2·030*	...	...	51 20	......
932	2 Aquilæ	...	4	·59	18 34 49·66	3·285	2	·68	99 10 45·70	3·04
933	4 Aquilæ	...	1	·65	18 37 58·17	3·027	1	·65	88 4 29·12	3·31
934	5 Aquilæ (1)...	...	2	·51	18 39 27·11	3·096	2	·51	91 6 8·89	3·43
935	5 Aquilæ (2)...	...	2	·51	18 39 27·79	3·096	2	·51	91 6 13·57	3·43
936	B.A.C. 6401 ...	...	1	·67	18 42 9·63	3·738	1	·67	116 55 20·04	3·67
937	B.A.C. 6422 ...	...	1	·66	18 44 36·03	3·766	1	·66	117 55 4·76	3·87
938	β Lyræ.........	...	4	·44	18 45 3·58	2·212*	3	·72	56 47 33·98	3·89*
939	33 Sagittarii ...	...	3	·62	18 45 52·44	3·587	3	·62	111 31 22·60	3·99
940	B.A.C. 6448 ...	6·0	3	·56	18 47 46·47	3·635	3	·56	113 20 36·51	4·15
941	B.A.C. 6450 ...	...	2	·67	18 48 20·05	3·634	2	·67	113 19 2·77	4·20
942	ξ^1 Sagittarii ...	...	2	·57	18 49 15·47	3·567	2	·57	110 49 50·78	4·28
943	10 Aquilæ......	...	1	·55	18 52 32·41	2·753	1	·55	76 16 25·07	4·56
944	11 Aquilæ......	...	1	·58	18 52 50·05	2·760	1	·58	76 33 21·72	4·58
945	B.A.C. 6485 ...	...	2	·66	18 53 25·87	+3·620	2	·66	112 53 3·00	− 4·63

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					h. m. s.	s.			° ′ ″	″
946	ε Aquilæ	...	8	0·64	18 53 26·98	+2·725	5	0·65	75 6 49·66	− 4·63
947	λ Lyræ	6·0	1	·60	18 54 53·09	2·261	1	·60	58 2 33·63	4·76
948	*g* Aquilæ	...	1	·56	18 55 44·73	3·159	1	·56	93 53 36·29	4·83
949	B.A.C. 6513 ...	...	1	·55	18 57 18·31	3·671	1	·55	114 52 30·77	4·96
950	B.A.C. 6519 ...	...	1	·69	18 57 53·72	3·438	1	·69	105 51 42·16	5·01
951	B.A.C. 6524 ...	...	2	·66	18 58 47·46	3·612	2	·66	112 42 10·92	5·09
952	Radcliffe 4208.	...	...	...	18 58 52	......	5	·57	3 27 58·92	5·09
953	B.A.C. 6527 ...	...	1	·53	18 58 54·94	2·627	1	·53	71 4 28·24	5·10
954	ζ Aquilæ	...	6	·59	18 59 9·59	2·752*	3	·70	76 20 10·82	5·05*
955	B.A.C. 6544 ...	...	1	·74	19 0 45·64	3·519	1	·74	109 9 51·30	5·26
956	B.A.C. 6560 ...	...	2	·58	19 4 10·81	3·410	2	·58	104 48 24·12	5·54
957	19 Lyræ	...	1	·62	19 6 32·65	2·299	1	·62	58 56 25·01	5·74
958	B.A.C. 6574 ...	...	2	·55	19 6 46·76	2·571	2	·55	68 40 20·26	5·76
959	ψ Sagittarii ...	...	9	·64	19 7 11·91	3·681	7	·67	115 29 16·97	5·80
960	B.A.C. 6576 ...	...	1	·74	19 7 16·30	3·652	1	·74	114 24 30·17	5·80
961	*d* Sagittarii ...	...	2	·56	19 9 40·57	3·515	2	·56	109 11 31·37	6·01
962	ω Aquilæ	...	7	·63	19 11 25·89	2·814*	5	·66	78 38 51·13	6·17*
963	B.A.C. 6604 ...	...	1	·66	19 12 25·58	3·649	1	·66	114 27 14·26	6·24
964	B.A.C. 6627 ...	...	1	·73	19 15 48·94	3·832	1	·73	121 3 30·58	6·51
965	χ^1 Sagittarii ...	...	2	·58	19 16 59·73	3·653	2	·58	114 46 9·88	6·61
966	B.A.C. 6641 ...	7·0	2	·65	19 18 23·24	3·567	2	·65	111 30 42·24	6·73
967	δ Aquilæ	...	9	·64	19 18 38·42	3·024*	7	·66	87 9 14·11	6·85*
968	B.A.C. 6651 ...	...	1	·56	19 19 13·11	2·151	1	·56	53 48 54·30	6·79
969	B.A.C. 6658 ...	...	1	·64	19 20 10·46	3·494	1	·64	108 37 52·23	6·88
970	5 Vulpeculæ ...	...	2	·54	19 20 16·89	2·618	4	·56	70 10 11·90	6·88
971	4 Cygni.........	...	1	·65	19 21 15·22	2·158	1	·65	53 57 10·51	6·96
972	B.A.C. 6671 ...	...	1	·67	19 22 49·52	3·566	1	·67	111 35 32·84	7·09
973	α Vulpeculæ ...	...	3	·58	19 23 2·81	2·504	1	·63	65 36 28·62	7·11
974	7 Vulpeculæ ...	...	2	·69	19 23 25·07	2·616	2	·69	69 59 53·80	7·14
975	B.A.C. 6677 ...	...	2	·63	19 23 34·17	3·748	2	·63	118 29 45·45	7·15
976	B.A.C. 6682 ...	...	1	·75	19 24 11·83	3·741	1	·75	118 16 33·66	7·20
977	B.A.C. 6695 ...	...	2	·60	19 26 7·56	2·602	2	·60	69 21 27·57	7·36
978	8 Cygni.........	...	1	·73	19 26 43·01	2·228	1	·73	55 50 1·74	7·41
979	μ Aquilæ	...	1	·62	19 27 26·66	2·917	...	...	82 54	......
980	h^2 Sagittarii ...	...	6	·64	19 28 25·75	+3·656*	4	·61	115 10 49·84	− 7·57*

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					h. m. s.	s.			° ′ ″	″
981	B.A.C. 6707 ...	6·0	1	0·55	19 28 30·35	+3·501	1	0·55	109 8 59·74	−7·56
982	9 Vulpeculæ ...	...	2	·55	19 28 36·47	2·633	2	·55	70 31 17·08	7·56
983	Groombr. 2900	...	...	...	19 29 51	......	2	·60	10 40 22·10	7·66
984	B.A.C. 6716 ...	...	1	·64	19 30 26·78	3·752	1	·64	118 54 39·94	7·71
985	W.B.(2)xix.943	8·0	1	·74	19 30 47·70	2·504	1	·74	65 17 59·66	7·74
986	11 Cygni	...	...	...	19 30 56	......	2	·70	53 21 23·68	7·75
987	45 Aquilæ	...	2	·64	19 33 42·83	3·090	2	·64	90 56 1·23	7·98
988	B.A.C. 6738 ...	...	1	·61	19 34 7·14	3·647	1	·61	115 10 24·60	8·01
989	46 Aquilæ	...	3	·60	19 35 49·95	2·814	3	·60	78 7 25·99	8·14
990	Piazzi xix. 248	...	1	·61	19 37 39·25	2·916	1	·61	82 44 6·01	8·29
991	10 Vulpeculæ .	6·0	2	·55	19 38 3·54	2·492	2	·55	64 33 5·27	8·33
992	ψ Aquilæ	...	3	·65	19 38 14·63	2·791	3	·65	77 1 15·04	8·34
993	υ Aquilæ	...	1	·55	19 39 2·78	2·916	1	·55	82 42 49·36	8·41
994	*	...	2	·70	19 39 21·11	3·739	2	·70	118 49 22·11	8·43
995	γ Aquilæ	...	3	·65	19 39 47·57	2·852*	5	·67	79 42 57·53	8·46*
996	B.A.C. 6776 ...	6·5	1	·75	19 40 24·67	3·374	1	·75	104 2 9·57	8·51
997	Radcliffe 4476 .	...	...	...	19 42 3	......	1	·74	4 11 59·47	8·64
998	α Aquilæ	...	4	·53	19 44 8·78	2·927*	1	·71	81 29 17·92	9·19*
999	12 Vulpeculæ .	...	2	·61	19 45 12·66	2·580	2	·61	67 44 0·72	8·89
1000	B.A.C. 6814 ...	7·5	3	·65	19 46 8·86	3·610	2	·64	114 16 33·18	8·97
1001	B.A.C. 6815 ...	...	1	·55	19 46 11·34	3·143	1	·55	93 27 50·76	8·97
1002	9 Sagittæ	7·0	1	·75	19 46 17·98	2·675	1	·75	71 40 33·13	8·97
1003	56 Aquilæ	7·5	1	·74	19 46 45·56	3·258	1	·74	98 55 28·85	9·01
1004	ε Draconis......	...	...	...	19 48 36	......	4	·68	20 4 43·07	9·16
1005	β Aquilæ	...	6	·65	19 48 37·96	2·947*	3	·68	83 55 50·48	8·68*
1006	φ Aquilæ	...	1	·64	19 49 47·78	2·839	1	·64	78 56 6·72	9·24
1007	10 Sagittæ ...	...	1	·55	19 49 50·43	2·725	1	·55	73 43 22·20	9·25
1008	B.A.C. 6850 ...	...	3	·61	19 51 30·35	3·562	3	·61	112 34 37·56	9·38
1009	B.A.C. 6854 ...	...	2	·74	19 52 10·72	3·724	2	·74	118 56 16·43	9·43
1010	c Sagittarii ...	...	1	·67	19 54 17·45	3·697	1	·67	118 5 8·65	9·60
1011	16 Vulpeculæ .	7·0	2	·59	19 56 15·35	2·537	2	·59	65 26 27·23	9·74
1012	λ Ursæ Minoris	...	...	...	20 0 7	......	17	·49	1 5 54·76	10·01*
1013	B.A.C. 6903 ...	7·5	1	·73	20 0 21·38	3·473	1	·73	109 11 39·80	10·05
1014	B.A.C. 6920 ...	...	1	·67	20 1 54·58	3·625	1	·67	115 40 46·91	10·17
1015	θ Aquilæ	...	3	·61	20 4 17·19	+3·095	2	·61	91 13 21·38	−10·35

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					h. m. s.	s.			° ′ ″	″
1016	66 Aquilæ......	6·4	3	0·64	20 6 12·52	+3·099	3	0·64	91 24 53·39	−10·49
1017	B.A.C. 6949 ...	7·5	1	·74	20 7 20·36	3·298	1	·74	101 17 59·86	10·58
1018	B.A.C. 6953 ...	...	1	·58	20 8 19·46	3·410	1	·58	106 42 25·26	10·65
1019	21 Vulpeculæ .	...	...	...	20 8 39	......	2	·66	61 42 54·73	10·67
1020	α^1 Capricorni .	5·0	2	·76	20 10 6·41	3·330	2	·76	102 55 33·97	10·79
1021	α^2 Capricorni .	...	2	·67	20 10 30·31	3·333*	2	·67	102 57 50·47	10·82*
1022	B.A.C. 6982 ...	...	1	·67	20 11 36·66	3·610	1	·67	115 38 47·31	10·89
1023	B.A.C. 6987 ...	...	2	·75	20 12 36·27	+3·480	2	·75	110 4 16·03	10·97
1024	κ Cephei	...	2	·16	20 13 24·18	−1·885	4	·18	12 42 0·55	11·03
1025	B.A.C. 7009 ...	7·3	1	·61	20 15 49·77	+3·361	1	·61	104 41 24·68	11·21
1026	25 Vulpeculæ .	6·7	2	·61	20 16 12·55	2·577	2	·61	65 59 8·94	11·23
1027	B.A.C. 7019 ...	7·5	2	·71	20 17 13·12	3·470	2	·71	109 52 18·17	11·30
1028	B.A.C. 7023 ...	8·0	2	·66	20 17 38·76	3·307	2	·66	102 8 35·73	11·34
1029	B.A.C. 7026 ...	...	1	·74	20 18 11·78	3·694	1	·74	119 30 49·60	11·37
1030	B.A.C. 7030 ...	...	1	·66	20 19 8·76	3·685	1	·66	119 15 28·08	11·44
1031	B.A.C. 7034 ...	...	1	·65	20 19 51·65	3·607	1	·65	116 3 11·34	11·49
1032	ρ Capricorni ...	...	6	·66	20 21 5·98	3·426*	7	·67	108 15 39·26	11·58*
1033	68 Aquilæ......	...	1	·74	20 21 17·78	3·143	1	·74	93 48 18·66	11·59
1034	ο Capricorni ...	...	1	·76	20 22 5·97	3·446	1	·76	109 1 50·35	11·66
1035	40 Cygni	...	1	·64	20 22 32·17	2·222	1	·64	52 0 18·13	11·69
1036	B.A.C. 7057 ...	...	1	·75	20 22 36·98	3·686	1	·75	119 33 56·28	11·69
1037	B.A.C. 7087 ...	6·8	2	·75	20 26 37·32	3·341	2	·75	104 11 7·91	11·98
1038	ε Delphini......	...	3	·67	20 26 42·93	2·866	6	·63	79 9 22·95	11·98
1039	η Delphini ...	...	1	·60	20 27 30·96	2·833	1	·60	77 26 10·72	12·04
1040	B.A.C. 7097 ...	7·0	1	·61	20 27 50·29	3·397	1	·61	106 59 28·67	12·06
1041	τ^1 Capricorni .	...	2	·66	20 29 43·37	3·367	2	·66	105 36 58·57	12·20
1042	B.A.C. 7111 ...	...	1	·75	20 29 46·40	3·519	1	·75	112 54 55·57	12·20
1043	B.A.C. 7113 ...	...	1	·67	20 30 1·80	3·559	1	·67	114 42 1·17	12·21
1044	B.A.C. 7130 ...	7·0	1	·76	20 32 8·60	3·124	2	·75	92 53 20·35	12·36
1045	W.B.(1)xx.827	...	1	·71	20 32 46·45	2·782	1	·71	74 38 14·42	12·40
1046	α Delphini ...	...	1	·76	20 33 19·30	2·781	1	·76	74 33 54·76	12·44
1047	B.A.C. 7151 ...	...	1	·73	20 33 36·58	3·408	1	·73	107 51 30·84	12·46
1048	B.A.C. 7159 ...	7·3	2	·76	20 34 55·41	3·421	2	·76	108 35 37·29	12·53
1049	α Cygni.........	...	1	·19	20 36 47·73	2·043*	1	·19	45 12 16·00	12·68*
1050	B.A.C. 7170 ...	...	1	·74	20 37 3·14	+3·615	1	·74	117 44 16·84	−12·70

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					h. m. s.	s.			° ′ ″	″
1051	B.A.C. 7172 ...	...	3	0·61	20 37 4·43	+3·150	3	0·61	94 24 13·01	−12·70
1052	Radcliffe 4980 .	8·2	...	...	20 38 14	......	2	·74	2 29 11·64	12·78
1053	B.A.C. 7180 ...	7·0	2	·69	20 38 17·33	3·536	2	·69	114 13 0·03	12·78
1054	B.A.C. 7183 ...	...	1	·70	20 38 34·83	3·500	...	...	112 39	......
1055	ε Aquarii	...	2	·68	20 40 18·63	3·250	1	·74	99 59 30·06	12·91
1056	B.A.C. 7230 ...	...	...	...	20 42 26	......	2	·65	6 51 1·75	13·05
1057	B.A.C. 7216 ...	...	2	·73	20 42 29·06	3·554	2	·75	115 28 55·69	13·06
1058	B.A.C. 7232 ...	7·0	2	·72	20 44 34·09	3·283	2	·72	101 56 46·44	13·19
1059	B.A.C. 7237 ...	6·7	2	·71	20 45 2·35	3·524	2	·71	114 17 24·28	13·23
1060	μ Aquarii	...	1	·70	20 45 18·94	3·238	1	·70	99 29 28·69	13·25
1061	B.A.C. 7247 ...	...	1	·62	20 46 43·24	3·201	1	·62	97 24 6·23	13·34
1062	B.A.C. 7248 ...	6·5	2	·68	20 47 2·32	3·420	2	·68	109 18 24·95	13·35
1063	32 Vulpeculæ .	...	6	·68	20 48 45·85	2·554*	5	·72	62 27 28·92	13·47*
1064	B.A.C. 7255 ...	...	2	·70	20 48 52·00	3·001	2	·70	85 59 7·08	13·48
1065	17 Delphini ...	6·7	1	·74	20 49 10·28	2·839	1	·74	76 47 43·62	13·49
1066	B.A.C. 7263 ...	...	1	·63	20 50 3·68	3·363	1	·63	106 33 9·23	13·55
1067	33 Vulpeculæ .	6·0	1	·61	20 52 11·53	2·680	1	·61	68 11 56·52	13·69
1068	B.A.C. 7285 ...	7·0	2	·68	20 53 22·22	2·951	2	·68	83 0 43·15	13·76
1069	B.A.C. 7287 ...	6·0	2	·71	20 53 40·69	3·574	2	·71	117 24 36·02	13·79
1070	Rad. 5090, S.P.	...	...	...	20 55 14	......	1	·24	4 50 39·57	13·89
1071	B.A.C. 7303 ...	...	1	·70	20 55 40·73	3·384	...	...	108 0	......
1072	3 Equulei	6·0	2	·67	20 57 48·20	2·987	2	·67	85 2 9·18	14·04
1073	θ Capricorni ...	...	9	·74	20 58 17·91	3·376	8	·73	107 46 15·68	14·08
1074	A Capricorni ...	...	2	·63	20 59 10·08	3·524	2	·63	115 32 50·69	14·13
1075	26 Capricorni .	7·5	1	·61	21 1 30·01	3·427	1	·61	110 44 29·11	14·28
1076	ν Aquarii	...	2	·78	21 2 10·97	3·268	2	·78	101 55 14·54	14·32
1077	γ Equulei	6·0	1	·76	21 3 43·78	2·914	1	·76	80 24 50·53	14·41
1078	ζ Cygni	...	4	·61	21 7 8·96	2·548*	12	·70	60 19 44·58	14·55*
1079	φ Capricorni...	...	1	·74	21 7 53·42	3·425	1	·74	111 12 52·74	14·66
1080	B.A.C. 7373 ...	...	1	·61	21 7 58·51	2·406	1	·61	53 55 35·31	14·66
1081	14 Aquarii......	7·0	1	·61	21 8 59·47	3·227	1	·61	99 46 48·52	14·73
1082	α Equulei	...	2	·75	21 9 1·41	2·996	2	·75	85 18 45·82	14·73
1083	30 Capricorni .	...	2	·71	21 10 19·39	3·373	1	·76	108 33 8·38	14·81
1084	15 Aquarii......	...	1	·62	21 11 2·75	3·151	1	·62	95 5 19·58	14·84
1085	16 Aquarii......	...	1	·63	21 13 56·29	+3·151	1	·63	95 8 7·81	−15·01

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					h. m. s.	s.			° ′ ″	″
1086	ι Capricorni ...	...	5	0·73	21 14 40·23	+3·348	4	0·73	107 24 41·89	−15·06
1087	α Cephei	...	1	·28	21 15 19·70	1·438*	18	·52	27 59 23·24	15·11*
1088	18 Aquarii......	...	1	·74	21 16 45·71	3·280	1	·74	103 27 35·96	15·18
1089	20 Aquarii......	7·3	1	·66	21 17 46·38	3·131	1	·66	93 58 48·67	15·24
1090	B.A.C. 7463 ...	...	1	·75	21 22 21·39	3·376	1	·75	109 44 22·75	15·49
1091	B.A.C. 7473 ...	...	1	·67	21 23 47·37	3·375	1	·67	109 50 1·80	15·57
1092	β Aquarii	...	3	·69	21 24 23·84	3·163*	3	·69	96 10 4·52	15·61*
1093	B.A.C. 7479 ...	...	2	·66	21 24 42·84	+3·465	2	·66	115 11 21·47	15·62
1094	Groombr. 3548	...	2	·27	21 26 9·69	−10·399	7	·56	3 31 55·49	15·70
1095	β Cephei	...	1	·23	21 26 53·23	+0·802*	17	·51	20 2 9·16	15·70*
1096	B.A.C. 7507 ...	7·0	1	·76	21 29 45·64	3·352	1	·76	109 2 43·60	15·90
1097	ξ Aquarii	...	4	·76	21 30 30·56	3·191	5	·75	98 27 45·57	15·94
1098	B.A.C. 7528 ...	...	1	·65	21 32 40·87	2·784	3	·69	70 20 47·60	16·05
1099	26 Aquarii......	...	1	·74	21 35 14·26	3·061	1	·74	89 19 57·24	16·19
1100	B.A.C. 7550 ...	...	2	·70	21 35 36·94	3·361	2	·70	110 14 24·40	16·20
1101	B.A.C. 7558 ...	7·3	1	·76	21 36 50·09	3·304	1	·76	106 35 29·52	16·27
1102	ε Pegasi.........	...	3	·58	21 37 30·31	2·948*	7	·72	80 44 48·85	16·31*
1103	c^1 Capricorni...	...	1	·67	21 37 45·12	3·203	1	·67	99 42 22·22	16·32
1104	c^2 Capricorni...	...	1	·74	21 39 0·87	3·205	1	·74	99 54 8·18	16·38
1105	δ Capricorni ...	...	2	·78	21 39 31·73	3·302	2	·78	106 44 34·61	16·41
1106	11 Cephei	...	...	...	21 39 54	......	2	·68	19 18 50·61	16·42
1107	B.A.C. 7599 ...	...	1	·81	21 42 20·03	3·250	1	·81	103 21 18·95	16·56
1108	13 Pegasi	7·0	1	·72	21 43 40·58	2·846	1	·72	73 20 42·60	16·61
1109	B.A.C. 7616 ...	7·0	1	·74	21 45 39·50	3·131	1	·74	94 37 50·18	16·71
1110	B.A.C. 7617 ...	...	1	·66	21 45 44·02	3·217	1	·66	101 11 58·30	16·71
1111	B.A.C. 7620 ...	...	2	·66	21 46 19·60	3·213	2	·66	100 57 3·46	16·74
1112	16 Pegasi	...	9	·76	21 46 52·50	2·726*	11	·76	64 42 48·52	16·76*
1113	B.A.C. 7629 ...	6·5	1	·75	21 47 10·31	2·991	1	·75	83 46 30·72	16·78
1114	17 Pegasi	...	2	·79	21 50 18·61	2·926	2	·79	78 34 4·60	16·93
1115	B.A.C. 7649 ...	7·0	2	·68	21 51 8·34	3·356	2	·68	111 49 47·73	16·97
1116	18 Pegasi	6·5	2	·84	21 53 20·41	2·996	2	·84	83 55 59·68	17·07
1117	O.A.(NZ)23169	8·5	1	·74	21 53 44·27	2·168	1	·74	37 47 43·19	17·09
1118	28 Aquarii......	6·0	1	·74	21 54 7·43	3·071	1	·74	90 2 51·79	17·10
1119	19 Pegasi	6·0	1	·83	21 54 24·26	2·978	1	·83	82 23 41·41	17·12
1120	B.A.C. 7675 ...	...	1	·67	21 56 52·42	+3·427	1	·67	117 28 47·03	−17·23

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					h. m. s.	s.			° ′ ″	″
1121	α Aquarii	...	6	0·70	21 58 47·85	+3·083*	6	0·70	90 58 45·18	−17·30*
1122	ξ^2 Cephei	...	...	...	21 59 51	......	4	·54	26 2 2·98	17·36
1123	B.A.C. 7697 ...	7·3	1	·84	22 0 3·35	3·201	1	·84	101 6 35·86	17·37
1124	ι Pegasi.........	6·5	3	·81	22 0 40·86	2·765	5	·76	65 19 4·37	17·40
1125	25 Pegasi	...	1	·88	22 1 27·09	2·816	1	·88	68 57 26·97	17·43
1126	B.A.C. 7709 ...	...	1	·65	22 1 27·42	3·235	...	...	103 58	......
1127	B.A.C. 7739 ...	...	1	·66	22 4 55·19	3·409	1	·66	117 45 17·09	17·58
1128	39 Aquarii......	...	1	·86	22 5 5·67	3·241	1	·86	104 51 45·48	17·59
1129	B.A.C. 7742 ...	...	1	·84	22 5 17·51	2·894	1	·84	74 37 40·45	17·60
1130	B.A.C. 7752 ...	...	1	·76	22 6 46·26	3·128	1	·76	95 7 24·31	17·66
1131	B.A.C. 7757 ...	...	...	...	22 7 25	......	2	·82	62 3 50·34	17·68
1132	B.A.C. 7762 ...	7·0	1	·74	22 8 5·94	3·140	1	·74	96 15 35·72	17·71
1133	θ Aquarii	5·0	10	·76	22 9 39·32	3·170*	9	·76	98 27 34·28	17·74*
1134	B.A.C. 7793 ...	7·5	2	·70	22 14 16·83	3·143	2	·70	96 55 37·46	17·96
1135	γ Aquarii	...	10	·84	22 14 37·83	3·092	9	·84	92 4 17·71	17·98
1136	B.A.C. 7804 ...	...	1	·70	22 16 23·93	3·152	2	·72	97 52 53·98	18·04
1137	B.A.C. 7809 ...	7·0	1	·83	22 17 36·04	3·089	1	·83	91 52 33·79	18·09
1138	B.A.C. 7817 ...	7·3	2	·70	22 18 39·11	3·330	2	·70	114 22 20·78	18·13
1139	54 Aquarii......	7·0	2	·81	22 19 28·16	3·190	2	·80	101 55 6·55	18·16
1140	56 Aquarii......	...	1	·84	22 22 59·98	3·221	1	·84	105 16 49·03	18·29
1141	ζ Piscis Austr..	...	1	·75	22 23 19·87	3·347	1	·75	116 46 0·10	18·30
1142	σ Aquarii	...	8	·74	22 23 26·87	+3·180	8	·74	101 22 23·94	18·31
1143	Groombr. 3820	...	2	·29	22 23 38·24	−3·743	8	·54	4 34 42·52	18·31
1144	B.A.C. 7861 ...	...	1	·76	22 26 56·55	+3·166	1	·76	100 18 31·62	18·42
1145	η Aquarii	...	2	·72	22 28 22·00	3·082*	2	·72	90 49 3·17	18·42*
1146	61 Aquarii......	...	1	·72	22 28 29·24	+3·241	1	·72	108 9 37·92	18·48
1147	Rad. 5760, S.P.	...	1	·25	22 28 51·80	−2·179	1	·25	5 37 57·11	18·49
1148	Radcliffe 5776 .	...	...	...	22 29 34	......	1	·83	2 36 40·15	18·52
1149	κ Aquarii	...	1	·88	22 30 47·69	+3·114	1	·88	94 55 42·59	18·55
1150	40 Pegasi	...	1	·75	22 32 17·87	2·901	1	·75	71 10 48·37	18·60
1151	B.A.C. 7899 ...	...	1	·75	22 33 6·57	3·134	1	·75	97 14 28·31	18·63
1152	41 Pegasi	7·3	2	·79	22 33 11·76	2·901	2	·79	71 1 32·42	18·63
1153	ζ Pegasi.........	...	3	·84	22 34 40·79	2·987*	3	·84	79 52 39·30	18·69*
1154	B.A.C. 7912 ...	...	...	...	22 35 14	......	2	·84	76 11 31·85	18·70
1155	B.A.C. 7920 ...	...	1	·68	22 36 6·18	+3·137	2	·76	97 55 36·66	−18·72

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					h. m. s.	s.			° ′ ″	″
1156	g^1 Aquarii......	...	1	0·93	22 36 15·78	+3·240	1	0·93	109 32 28·45	−18·73
1157	20 Piscis Austr.	...	1	·88	22 38 4·49	3·298	1	·88	115 57 3·61	18·78
1158	B.A.C. 7935 ...	7·5	4	·75	22 38 11·99	3·156	3	·75	100 21 28·68	18·79
1159	τ^1 Aquarii......	6·7	1	·72	22 40 29·62	3·190	1	·72	104 46 20·67	18·86
1160	μ Pegasi	...	1	·77	22 43 26·49	2·877	1	·77	66 6 55·15	18·95
1161	B.A.C. 7964 ...	8·0	1	·93	22 44 38·09	2·969	2	·84	76 45 29·52	18·98
1162	ι Cephei.........	...	...	...	22 44 51	......	6	·85	24 30 52·10	18·99
1163	λ Aquarii	...	6	·83	22 45 31·00	3·133	5	·85	98 18 9·33	19·01
1164	B.A.C. 7977 ...	7·3	3	·76	22 46 55·70	3·063	3	·76	88 52 44·98	19·04
1165	75 Aquarii......	7·3	1	·72	22 46 56·50	3·166	1	·72	102 54 42·21	19·04
1166	Fomalhaut......	...	1	·75	22 50 7·71	3·330*	1	·75	120 20 32·55	18·96*
1167	B.A.C. 7993 ...	7·3	1	·93	22 50 14·70	3·109	1	·93	95 32 9·43	19·13
1168	B.A.C. 8001 ...	...	1	·68	22 51 41·41	3·011	1	·68	81 21 54·65	19·17
1169	52 Pegasi	...	1	·75	22 52 23·65	2·995	1	·75	78 59 51·17	19·19
1170	B.A.C. 8007 ...	6·0	1	·87	22 52 43·84	3·258	1	·87	115 53 23·19	19·20
1171	B.A.C. 8017 ...	7·0	1	·77	22 54 29·39	3·106	1	·77	95 26 29·87	19·24
1172	B.A.C. 8019 ...	7·3	3	·78	22 54 48·11	3·053	3	·78	87 11 50·18	19·25
1173	82 Aquarii......	...	1	·88	22 55 28·79	3·118	1	·88	97 18 12·32	19·27
1174	β Piscium......	...	2	·93	22 56 57·32	3·051	2	·93	86 54 40·06	19·30
1175	α Pegasi	...	4	·55	22 57 59·20	2·983*	2	·81	75 31 32·78	19·31*
1176	c^1 Aquarii......	...	1	·75	22 59 22·20	3·229	1	·75	114 28 38·63	19·36
1177	A Piscium	...	1	·90	23 1 43·02	3·063	1	·90	88 36 42·87	19·41
1178	B.A.C. 8065 ...	7·3	1	·83	23 2 26·08	3·063	1	·83	88 35 34·37	19·43
1179	57 Pegasi	6·4	3	·85	23 2 39·60	3·024	3	·85	82 3 32·24	19·44
1180	58 Pegasi	...	1	·85	23 3 10·64	3·018	1	·85	80 54 52·23	19·45
1181	W.B.(2)xxiii.61	7·0	1	·82	23 4 36·21	2·891	1	·82	60 41 42·60	19·47
1182	*	9·0	1	·72	23 5 10·03	2·909	1	·72	62 46 43·72	19·49
1183	B.A.C. 8091 ...	...	1	·72	23 8 19·73	2·917	1	·72	62 40 7·92	19·55
1184	61 Pegasi	6·0	2	·79	23 9 7·97	2·918	3	·81	62 29 34·02	19·56
1185	B.A.C. 8099 ...	8·0	1	·89	23 9 25·55	2·919	1	·89	62 30 48·63	19·57
1186	γ Piscium......	...	9	·85	23 10 6·88	3·106*	8	·85	87 27 37·10	19·57*
1187	B.A.C. 8129 ...	...	1	·85	23 13 40·27	3·102	1	·85	96 39 0·52	19·64
1188	66 Pegasi	6·0	1	·74	23 16 13·15	3·018	1	·74	78 25 51·39	19·69
1189	B.A.C. 8152 ...	7·0	2	·89	23 16 33·29	3·073	2	·89	90 27 19·03	19·69
1190	B.A.C. 8155 ...	6·3	1	·89	23 16 54·03	+3·174	1	·89	112 31 3·07	−19·70

No.	Name of Star.	Mag.	Number of Obs. of R.A.	Fraction of the Year for Mean.	Mean R.A. 1864, Jan. 1.	Pre-cession in R.A.	Number of Obs. of N.P.D.	Fraction of the Year for Mean.	Mean N.P.D. 1864, Jan. 1.	Pre-cession in N.P.D.
					h. m. s.	s.			° ′ ″	″
1191	B.A.C. 8167 ...	6·0	1	0·74	23 19 25·02	+3·168	1	0·74	112 29 18·57	−19·74
1192	κ Piscium	...	6	·82	23 19 57·64	3·075*	6	·82	89 29 17·95	19·63*
1193	69 Pegasi	...	2	·80	23 20 55·17	2·968	5	·81	65 34 45·04	19·76
1194	B.A.C. 8175 ...	7·5	2	·80	23 21 0·43	3·120	2	·80	102 11 51·02	19·77
1195	12 Piscium ...	7·3	1	·74	23 22 32·12	3·078	1	·74	91 47 2·43	19·79
1196	Radcliffe 6099 .	7·4	...	...	23 24 14	......	4	·58	4 19 51·35	19·81
1197	b^3 Aquarii......	...	1	·85	23 24 34·25	3·154	1	·85	112 7 11·27	19·82
1198	B.A.C. 8199 ...	7·0	1	·90	23 25 9·51	3·115	1	·90	102 17 40·27	19·82
1199	72 Pegasi	5·3	1	·91	23 27 12·60	2·958	1	·91	59 25 31·57	19·85
1200	Rad. 6117, S.P.	...	1	·28	23 27 14·68	+0·476	1	·28	4 11 31·63	19·85
1201	Gr. 4101, S.P..	...	1	·30	23 27 52·73	−0·042	5	·31	3 26 33·53	19·86
1202	15 Piscium ...	6·3	3	·81	23 28 31·48	+3·069	3	·81	89 16 15·60	19·87
1203	B.A.C. 8216 ...	6·5	2	·83	23 29 0·75	3·165	2	·83	117 37 42·57	19·87
1204	ι Piscium	...	4	·89	23 32 57·29	3·084*	3	·92	85 6 38·53	19·47*
1205	B.A.C. 8234 ...	7·0	2	·75	23 32 59·33	3·046	2	·75	81 4 32·02	19·92
1206	γ Cephei	...	...	...	23 33 47	......	9	·80	13 7 36·56	20·08*
1207	B.A.C. 8247 ...	...	2	·75	23 35 38·99	3·025	2	·75	72 5 14·49	19·94
1208	76 Pegasi	...	2	·80	23 35 49·80	3·031	2	·80	74 25 6·98	19·94
1209	77 Pegasi	6·0	2	·79	23 36 27·10	3·047	2	·79	80 25 23·39	19·95
1210	B.A.C. 8257 ...	...	1	·75	23 37 52·60	3·056	1	·75	83 33 44·61	19·96
1211	Radcliffe 6172 .	...	...	...	23 38 24	......	1	·86	5 17 9·14	19·97
1212	B.A.C. 8266 ...	...	1	·77	23 40 15·44	3·097	2	·79	102 39 47·98	19·98
1213	B.A.C. 8272 ...	...	1	·76	23 41 15·24	3·056	1	·76	82 30 31·23	19·99
1214	δ Sculptoris ...	...	4	·90	23 41 50·24	3·133*	4	·90	118 52 56·68	19·92*
1215	21 Piscium ...	6·0	1	·85	23 42 29·99	3·070	1	·85	89 40 45·79	20·00
1216	108 Aquarii ...	...	1	·83	23 44 19·97	3·103	1	·83	109 39 56·36	20·01
1217	80 Pegasi	6·6	2	·74	23 44 24·96	3·056	2	·74	81 26 26·61	20·01
1218	B.A.C. 8297 ...	...	1	·88	23 45 30·60	3·094	1	·88	105 0 27·95	20·02
1219	82 Pegasi	...	1	·85	23 45 41·04	3·056	1	·85	79 48 33·86	20·02
1220	B.A.C. 8304 ...	6·0	1	·74	23 46 18·64	3·108	1	·74	114 59 6·80	20·02
1221	B.A.C. 8308 ...	...	1	·85	23 47 19·62	3·110	1	·85	117 47 59·06	20·03
1222	ψ Pegasi	...	1	·77	23 50 49·82	3·047	1	·77	65 36 50·08	20·04
1223	ω Piscium......	...	10	·82	23 52 19·65	3·077*	9	·82	83 53 22·39	19·92*
1224	B.A.C. 8332 ...	...	1	·90	23 52 28·29	3·096	1	·90	120 14 28·77	20·04
1225	B.A.C. 8335 ...	...	1	·90	23 52 50·42	+3·063	1	·90	79 29 1·55	−20·05

No.	Name of Star.	Mag.	Number of Obs. of R.A.	Fraction of the Year for Mean.	Mean R.A. 1864, Jan. 1.	Pre-cession in R.A.	Number of Obs. of N.P.D.	Fraction of the Year for Mean.	Mean N.P.D. 1864, Jan. 1.	Pre-cession in N.P.D.
					h. m. s.	s.			° ′ ″	″
1226	B.A.C. 8337 ...	7·0	1	0·74	23 53 26·86	+3·052	2	0·77	63 50 14·00	−20·05
1227	c^3 Piscium......	6·0	2	·79	23 55 32·81	3·068	2	·79	82 16 10·67	20·05
1228	2 Ceti	...	1	·88	23 56 46·18	3·076	2	·88	108 5 35·60	20·05
1229	B.A.C. 8360 ...	6·0	2	·79	23 57 21·72	3·076	2	·79	107 17 4·19	20·05
1230	B.A.C. 8365 ...	6·7	2	·75	23 58 5·44	+3·071	2	·75	91 15 30·36	20·05
1231	86 Pegasi	...	...	...	23 58 43	......	2	·85	77 21 38·00	−20·06

Notes to the Right Ascensions.

B.A.C. 113. —The R.A. is $0^{s}.6$ greater than that in the B.A.C., which depends on Baily's Flamsteed (B. F.)
B.A.C. 182. —The R.A. is $0^{s}.8$ greater than that in the B.A.C., which depends on Bradley.
B.A.C. 269. —The R.A. is $0^{s}.5$ " "
B.A.C. 299. —The R.A. is 1^{s} " " which depends on B.F.
B.A.C. 371. —The R.A. is $0^{s}.5$ " " which depends on B. F.
B.A.C. 375. —The R.A. is 1^{s} " " which depends on B. F.
7 Trianguli. —The R.A. is $0^{s}.6$ " "
B.A.C. 722. —The R.A. is $0^{s}.7$ " "
B.A.C. 738. —The R.A. is $0^{s}.8$ " "
B.A.C. 774. —The R.A. is $0^{s}.6$ " "
B.A.C. 834. —The R.A. is $0^{s}.8$ " " which depends on B. F.
B.A.C. 1079.—The R.A. is $0^{s}.7$ " "
B.A.C. 1193.—The R.A. is $0^{s}.5$ " "
B.A.C. 1427.—The R.A. is $0^{s}.9$ " "
B.A.C. 2021.—The R.A. is $0^{s}.7$ " "
B.A.C. 2057.—The R.A. is $0^{s}.5$ " "
35 Geminor. —The R.A. is $0^{s}.8$ " "
B.A.C. 2393.—The R.A. in the B.A.C. appears to be 1^{s} too great.
B.A.C. 2565.—The R.A. is $0^{s}.6$ greater than that in the B.A.C., which depends on B. F.
B A.C. 2605.—The R.A. is $0^{s}.7$ " "
B.A.C. 2843.—The R.A. is $3^{s}.04$ " " which depends on Lacaille and Brisbane, and assumes a proper motion of $-0^{s}.047$.
B.A.C. 3039.—The R.A. is $0^{s}.6$ less than that in the B.A.C.
B.A.C. 3243.—The R.A. is $0^{s}.5$ " "
B.A.C. 3340.—The R.A. is $0^{s}.7$ " "
B.A.C. 3356.—The R.A. is 1^{s} " "
B.A.C. 3409.—The R.A. is $0^{s}.8$ " " but agrees nearly with an obs. in 1862.
33 Leonis. —The R.A. is $0^{s}.6$ " "
B.A.C. 3540.—The R.A. is $0^{s}.8$ " "
B.A.C. 3592.—The R.A. is $0^{s}.8$ " "
ϕ^{1} Hydræ. —The R.A. is $0^{s}.5$ " "
B.A.C. 3637.—The R.A. is $0^{s}.6$ greater than that in the B.A.C., which depends on B. F.
Piazzi x. 140.—The R.A. is $0^{s}.9$ greater than that of Piazzi's Catalogue.
39 Sextantis.—The R.A. is $0^{s}.5$ greater than that in the B.A.C.
49 Leon. Min.—The R.A. is 1^{s} less than that in the B.A.C., which is incorrect.
B.A.C. 3795.—The R.A. is $0^{s}.7$ " "
B.A.C. 3808.—The R.A. is $0^{s}.5$ " "
B.A.C. 3811.—The R.A. is $0^{s}.5$ " "
B.A.C. 3828.—The R.A. is $1^{s}.5$ greater than that in the B.A.C.
B.A.C. 3884.—The R.A. is $0^{s}.5$ less than that in the B.A.C.
B.A.C. 3926.—The R.A. is $0^{s}.5$ " "
B.A.C. 3940.—The R.A. is 1^{s} " "
B.A.C. 4014.—The R.A. is $0^{s}.8$ " "
B.A.C. 4019.—The R.A. is 1^{s} " "
B.A.C. 4171.—The R.A. is $0^{s}.8$ " "
B.A.C. 4223.—The R.A. is $0^{s}.9$ greater than that in the B.A.C.
B.A.C. 4337.—The R.A. is $0^{s}.8$ less than that in the B.A.C.
B.A.C. 4455.—The R.A. is $0^{s}.5$ " "
B.A.C. 4513.—The R.A. is 1^{s} greater than that in the B.A.C., which depends on B. F.
B.A.C. 4554.—The R.A. is $0^{s}.7$ less than that in the B.A.C.
B.A.C. 4593.—The R.A. is $0^{s}.6$ " "
B.A.C. 4621.—The R.A. is 1^{s} greater than that in the B.A.C., which depends on B. F.
B.A.C. 4739.—The R.A. is $0^{s}.8$ " " which depends on Brisbane.

B.A.C. 4857.—The R.A. is $0^{s}.6$ less than that in the B.A.C., which depends on Brisbane.
B.A.C. 5167.—The R.A. is $1^{s}.8$ „ „ which assumes a proper motion of $+0^{s}.047$.
B.A.C. 5258.—The R.A. is $0^{s}.7$ „ „ which depends on Lacaille.
B.A.C. 5687.—The R.A. is $1^{s}.5$ „ „ which depends on Lacaille.
B.A.C. 5767.—The R.A. is $1^{s}.6$ greater „ which depends on Lacaille.
B.A.C. 5838.—The R.A. is $0^{s}.7$ „ „ which depends on Lacaille.
B.A.C. 5878.—The R.A. is 1^{s} less „ which depends on Lacaille.
B.A.C. 5879.—The R.A. is 10^{s} „ „ which depends on Lacaille, but agrees with Argelander.
B.A.C. 5989.—The R.A. is $0^{s}.5$ greater „ which depends on Lacaille.
B.A.C. 6023.—The R.A. is $0^{s}.6$ less „ which depends on Lacaille.
B.A.C. 6075.—The R.A. is $1^{s}.5$ „ „ which depends on Brisbane.
B.A.C. 6173.—The R.A. is nearly 8^{s} less „ which depends on Lacaille.
B.A.C. 6260.—The R.A. is $0^{s}.6$ greater „ which depends on Lacaille.
B.A.C. 6295.—The R.A. is 1^{s} „ „ which depends on Lacaille.
B.A.C. 6422.—The R.A. is $1^{s}.3$ less „ which depends on Lacaille.
B.A.C. 6450.—The R.A. is $0^{s}.8$ „ „
B.A.C. 6513.—The R.A. is $0^{s}.8$ „ „
B.A.C. 6544.—The R.A. is $0^{s}.7$ „ „ which depends on B. F.
B.A.C. 6574.—The R.A. is $0^{s}.9$ greater „ which depends on B. F.
B.A.C. 6576.—The R.A. is $0^{s}.5$ „ „
B.A.C. 6627.—The R.A. is 6^{s} less „ which depends on Lacaille.
B.A.C. 6716.—The R.A. is $0^{s}.9$ greater „ which depends on Lacaille.
B.A.C. 6738.—The R.A. is $0^{s}.7$ less „ which depends on Lacaille.
B.A.C. 6814.—The R.A. is $0^{s}.6$ „ „ which depends on Lacaille.
B.A.C. 6815.—The R.A. is $0^{s}.6$ greater „ which depends on B. F., but nearly agrees with observations in 1863.
B.A.C. 6854.—The R.A. is $1^{s}.5$ greater than that in the B.A.C., which depends on Lacaille.
B.A.C. 6982.—The R.A. is $1^{s}.5$ less „ which depends on Lacaille.
B.A.C. 7057.—The R.A. is 1^{s} greater „ which depends on Lacaille.
B.A.C. 7113.—The R.A. is $0^{s}.6$ „ „ which depends on Lacaille.
B.A.C. 7183.—The R.A. is $1^{s}.3$ less „ which depends on Lacaille.
B.A.C. 7216.—The R.A. is $0^{s}.6$ „ „ which depends on Lacaille.
B.A.C. 7248.—The R.A. is 1^{s} greater „ which depends on B. F.
26 Capricorni—The R.A. is $0^{s}.9$ less „
B.A.C. 7373.—The R.A. is $0^{s}.8$ „ „ which assumes a proper motion of $+0^{s}.012$.
B.A.C. 7528.—The R.A. is $0^{s}.6$ greater „ which depends on B. F.
B.A.C. 7809.—The R.A. appears to be 1^{s} too great. An observation in 1863 nearly agrees with that in the B.A.C.
B.A.C. 8065.—The R.A. is $0^{s}.5$ greater than that in the B.A.C.

Notes to the North Polar Distances.

B.A.C. 35. —The N.P.D. is 5″ greater than that in the B.A.C., which depends on B. F.
B.A.C. 113.—The N.P.D. is 6″ „ „ which depends on B. F.
51 Piscium.—The N.P.D. is 7″ „ „
k Piscium. —The N.P.D. is 7″ „ „
B.A.C. 299.—The N.P.D. is 10″ „ „ which depends on B. F.
B.A.C. 371.—The N.P.D. is 6″ „ „ which depends on B. F.
B.A.C. 375.—The N.P.D. is 6″ „ „ which depends on B. F.
4 Arietis. —The N.P.D. is 5″ „ „
1 Arietis. —The N.P.D. is 7″ „ „
11 Arietis. —The N.P.D. is 7″ less „
14 Arietis. —The N.P.D. is 5″ „ „

B.A.C. 722. —The N.P.D. is 9″ less than that in the B.A.C., which assumes a proper motion of $+0''\cdot21$.
B.A.C. 738. —The N.P.D. is 5″ greater „ which depends on B. F.
B.A.C. 764. —The N.P.D. is 9″ „ „ which depends on B. F.
B.A.C. 803. —The N.P.D. is 5″ less „ which assumes a proper motion of $+0''\cdot17$.
81 Ceti. —The N.P.D. is 5″ greater „
σ Arietis. —The N.P.D. is 7″ less „
B.A.C. 855. —The N.P.D. is 7″ „ „
ρ^1 Arietis. —The N.P.D. is 5″ greater „
59 Arietis. —The N.P.D. is 6″ „ „
B.A.C. 1109. —The N.P.D. is 9″ less „ which assumes a proper motion of $+0''\cdot25$.
B.A.C. 1114. —The N.P.D. is 8″ „ „
B.A.C. 1186. —The N.P.D. is 7″ greater „
B.A.C. 1226. —The N.P.D. is 4″ less „
B.A.C. 1239. —The N.P.D. is 4″ greater „
40 Tauri. —The N.P.D. is 8″ less „
B.A.C. 1281. —The N.P.D. is 5″ greater „
B.A.C. 1423. —The N.P.D. is 6″ „ „
5 Orionis. —The N.P.D. is 4″ less „
B.A.C. 1517. —The N.P.D. is 6″ „ „
66 Eridani. —The N.P.D. is 6″ „ „
B.A.C. 1601. —The N.P.D. is 4″ „ „
18 Orionis. —The N.P.D. is 4″ greater „
B.A.C. 1643. —The N.P.D. is 6″ „ „
B.A.C. 1647. —The N.P.D. is 6″ less „
B.A.C. 1651. —The N.P.D. is 4″ „ „
B.A.C. 1655. —The N.P.D. is 6″ greater „
110 Tauri. —The N.P.D. is 7″ „ „
B.A.C. 1711. —The N.P.D. is 7″ less „
B.A C. 1714. —The N.P.D. is 4″ greater „
B.A.C. 1789. —The N.P.D. is 5″ „ „
126 Tauri. —The N.P.D. is 4″ greater „
131 Tauri. —The N.P.D. is 7″ less „
B.A.C. 1831. —The N.P.D. is 6″ greater „
B.A.C. 1893. —The N.P.D. is 5″ „ „ which depends on B. F.
B.A.C. 1967. —The N.P.D. is 6″ „ „
B.A.C. 1997. —The N.P.D. is 7″ less „ which assumes a proper motion of $+0''\cdot20$.
8 Monocerotis. —The N.P.D. is 5″ „ „
B.A.C. 2060. —The N.P.D. is 6″ „ „
77 Orionis. —The N.P.D. is 4″ „ „
10 Monocerotis. —The N.P.D. is 5″ „ „
11 Monocerotis. —The N.P.D. is 5″ greater „
12 Monocerotis. —The N.P.D. is 10″ less „
22 Geminorum. —The N.P.D. is 4″ „ „
B.A.C. 2173. —The N.P.D. is 9″ „ „ which assumes a proper motion of $+0''\cdot20$.
15 Monocerotis. —The N.P.D. is 6″ „ „
B.A.C. 2189. —The N.P.D. is 4″ „ „
B.A.C. 2329. —The N.P.D. is 14″ greater „
51 Geminorum. —The N.P.D. is 6″ „ „ which is in error to that amount.
24 Monocerotis. —The N.P.D. is 5″ less „
B.A.C. 2393. —The N.P.D. is 8″ greater „ which depends on Bessel.
B.A.C. 2432. —The N.P.D. is 4″ „ „
s Puppis. —The N.P.D. is 22″ „ „

δ^1 Canis Minoris.—The N.P.D. is 6″ greater than that in the B.A.C.
67 Geminorum. —The N.P.D. is 4″ „ „
68 Geminorum. —The N.P.D. is 6″ „ „
25 Monocerotis. —The N.P.D. is 9″ „ „ but agrees with an observation of 1863.
m Puppis. —The N.P.D. is 7″ less „
B.A.C. 2538. —The N.P.D. is 4″ greater „ which depends on B. F.
B.A.C. 2587. —The N.P.D. is 5″ „ „
B.A.C. 2600. —The N.P.D. is 8″ „ „
10 Puppis. —The N.P.D. is 4″ less „
B.A.C. 2679. —The N.P.D. is 7″ „ „ which assumes a proper motion of +0″·16.
B.A.C. 2706. —The N.P.D. is 5″ „ „
B.A.C. 2791. —The N.P.D. is 5″ „ „
B.A.C. 2843. —The N.P.D. is 23″ greater „ which assumes a proper motion of −0″·48.
35 Cancri. —The N.P.D. is 10″ less „
c^1 Cancri. —The N.P.D. is 6″ greater „
c^2 Cancri. —The N.P.D. is 7″ less „
g Mali. —The N.P.D. is 5″ „ „
12 Hydræ. —The N.P.D. is 6″ greater „
B.A.C. 3005. —The N.P.D. is 13″ „ „ which assumes a proper motion of −0″·15.
71 Cancri. —The N.P.D. is 5″ less „
B.A.C. 3112. —The N.P.D. is 8″ „ „ which assumes a proper motion of +0″·24.
19 Hydræ. —The N.P.D. is 4″ greater „
20 Hydræ. —The N.P.D. is 6″ „ „
e Mali. —The N.P.D. is 6″ less „
B.A C. 3176. —The N.P.D. is 6″ „ „
B.A.C. 3185. —The N.P.D. is 6″ greater „
B.A.C. 3224. —The N.P.D. is 5″ „ „ which assumes a proper motion of −0″·19.
B.A.C. 3318. —The N.P.D. is 4″ „ „
B.A.C. 3343. —The N.P.D. is 7″ „ „ which assumes a proper motion of −0″·19.
B.A.C. 3391. —The N.P.D. is 9″ less „ which assumes a proper motion of +0″·23.
B.A.C. 3409. —The N.P.D. is 4″ „ „
B.A.C. 3438. —The N.P.D. is 4″ greater „
16 Sextantis. —The N.P.D. is 5″ „ „
33 Leonis. —The N.P.D. is 7″ „ „
B.A.C. 3471. —The N.P.D. is 5″ „ „ which depends on B. F.
B.A.C. 3538. —The N.P.D. is 5″ „ „
B.A.C. 3540. —The N.P.D. is 10″ less „ which assumes a proper motion of +0″·19.
B.A.C. 3553. —The N.P.D. is 6″ greater „ which depends on B. F.
B.A.C. 3562. —The N.P.D. is 9″ less „ which assumes a proper motion of +0″·20.
27 Sextantis. —The N.P.D. is 5″ greater „
B.A.C. 3582. —The N.P.D. is 5″ „ „
B.A.C. 3592. —The N.P.D. is 23″ „ „ which depends on B. F.
B.A.C. 3649. —The N.P.D. is 4″ less „
Piazzi x. 140. —The N.P.D. is 6″ greater than that in Piazzi.
43 Leonis Min. —The N.P.D. is 4″ less than that in the B.A.C.
45 Leonis Min. —The N.P.D. is 7″ „ „
40 Sextantis. —The N.P.D. is 5″ greater „
41 Sextantis. —The N.P.D. is 4″ „ „

B.A.C. 3726.	—The N.P.D. is	9″	greater than that in the B.A.C., which depends on B. F.		
45 Leonis Min.	—The N.P.D. is	7″	less	„	
49 Leonis Min.	—The N.P.D. is	5″	greater	„	
57 Leonis.	—The N.P.D. is	5″	„	„	
B.A.C. 3786.	—The N.P.D. is	5″	less	„	
52 Leonis Min.	—The N.P.D. is	5″	greater	„	
B.A.C. 3824.	—The N.P.D. is	5″	less	„	
B.A.C. 3845.	—The N.P.D. is	4″	„	„	
B.A.C. 3854.	—The N.P.D. is	5″	„	„	
B.A.C. 3871.	—The N.P.D. is	6″	greater	„	
81 Leonis.	—The N.P.D. is	5″	„	„	
B.A.C. 3904.	—The N.P.D. is	9″	less	„	
85 Leonis.	—The N.P.D. is	6″	greater	„	
B.A.C. 3940.	—The N.P.D. is	7″	„	„	
B.A.C. 3947.	—The N.P.D. is	5″	„	„	
B.A.C. 3975.	—The N.P.D. is	7″	less	„	
B.A.C. 3996.	—The N.P.D. is	17″	greater	„	which depends on B. F.
B.A.C. 4003.	—The N.P.D. is	7″	„	„	
B.A.C. 4014.	—The N.P.D. is	5″	„	„	
B.A.C. 4029.	—The N.P.D. is	5″	„	„	
B.A.C. 4032.	—The N.P.D. is	5″	„	„	
B.A.C. 4042.	—The N.P.D. is	14″	less	„	which assumes a proper motion of $+0''\cdot44$.
B.A.C. 4069.	—The N.P.D. is	5″	„	„	
B.A.C. 4134.	—The N.P.D. is	7″	greater	„	
14 Virginis.	—The N.P.D. is	7″	„	„	
B.A.C. 4149.	—The N.P.D. is	8″	„	„	
B.A.C. 4204.	—The N.P.D. is	6″	less	„	
B.A.C. 4220.	—The N.P.D. is	8″	greater	„	
B.A.C. 4231.	—The N.P.D. is	4″	„	„	which depends on B. F.
B.A.C. 4278.	—The N.P.D. is	5″	„	„	
B.A.C. 4291.	—The N.P.D. is	5″	„	„	
ψ Virginis.	—The N.P.D. is	4″	„	„	
B.A.C. 4337.	—The N.P.D. is	8″	„	„	which assumes a proper motion of $-0''\cdot14$.
46 Virginis.	—The N.P.D. is	4″	„	„	
40 Comæ.	—The N.P.D. is	8″	„	„	
B.A.C. 4431.	—The N.P.D. is	4″	„	„	
σ Virginis.	—The N.P.D. is	6″	„	„	
B.A.C. 4554.	—The N.P.D. is	9″	„	„	
B.A.C. 4576.	—The N.P.D. is	10″	„	„	
B.A.C. 4632.	—The N.P.D. is	33″	„	„	which depends on B. F.
B.A.C. 4662.	—The N.P.D. is	7″	less	„	
10 Boötis.	—The N.P.D. is	5″	greater	„	
W.B. (1) xiii. 904.	—The N.P.D. is	6″	less than that in W. B.		
B.A.C. 4694.	—The N.P.D. is	7″	greater than that in the B.A.C., which depends on B.F.		
B.A.C. 4777.	—The N.P.D. is	4″	„	„	
f Boötis.	—The N.P.D. is	7″	less	„	
B.A.C. 4800.	—The N.P.D. is	6″	„	„	which depends on Lac.
B.A.C. 4814.	—The N.P.D. is	5″	„	„	
B.A.C. 4840.	—The N.P.D. is	4″	„	„	
B.A.C. 4857.	—The N.P.D. is	40″	„	„	which depends on Lac.
B.A.C. 4888.	—The N.P.D. in the B.A.C., which depends on Lacaille, appears to be 30″ too great.				
B.A.C. 4926.	—The N.P.D. is	5″	less than that in the B.A.C.		
B.A.C. 4945.	—The N.P.D. is	4″	„	„	
B.A.C. 4997.	—The N.P.D. is	6″	greater	„	which depends on B. F.
B.A.C. 4998.	—The N.P.D. is	30″	„	„	which depends on Lac.

B.A.C. 5167. —The N.P.D. is 16″ less than that in the B.A.C., which assumes a proper motion of + 1″·13.

τ^6 Serpentis. —The N.P.D. is 6″ greater „

11 Scorpii. —The N.P.D. is 4″ „ „

B.A.C. 5354. —The N.P.D. is 31″ less „ which depends on Lacaille.

B.A.C. 5408. —The N.P.D. is 11″ greater „ which depends on B. F.

B.A.C. 5537. —The N.P.D. is 5″ „ „ which depends on B. F.

B.A.C. 5600. —The N.P.D. is 22″ „ „ which depends on Lacaille.

B.A.C. 5619. —The N.P.D. is 4″ less „

B.A.C. 5620. —The N.P.D. is 7″ greater „ which depends on B. F.

B.A.C. 5642. —The N.P.D. is 4″ „ „

48 Herculis. —The N.P.D. is 6″ less „

B.A.C. 5663. —The N.P.D. is 8″ „ „ which assumes a proper motion of + 0″·15.

B.A.C. 5687. —The N.P.D. in the B.A.C., which depends on B. F., appears to be about 30″ too great.

B.A.C. 5716. —The N.P.D. is 7″ less than that in the B.A.C., which depends on B. F.

B.A.C. 5730. —The N.P.D. is 9″ „ „ which depends on Lacaille.

B.A.C. 5737. —The N.P.D. is 9″ „ „ which depends on Lacaille.

B.A.C. 5774. —The N.P.D. is 5″ „ „

b Ophiuchi. —The N.P.D. is 5″ greater „

B.A.C. 5878. —The N.P.D. is 14″ less „ which depends on Lacaille.

B.A.C. 5909. —The N.P.D. is 8″ „ „

56 Ophiuchi. —The N.P.D. is 6″ „ „

B.A.C. 5989. —The N.P.D. is 15″ greater „ which depends on Lacaille.

B.A.C. 6023. —The N.P.D. is 18″ less „ which depends on Lacaille.

B.A.C. 6035. —The N.P.D. is 4″ greater „

B.A.C. 6075. —The N.P.D. in the B.A.C., which depends on Brisbane, appears to be one minute too small.

B.A.C. 6081. —The N.P.D. is 5″ less than that in the B.A.C.

68 Ophiuchi. —The N.P.D. is 6″ greater „

B.A.C. 6137. —The N.P.D. is 5″ less „

B.A.C. 6158. —The N.P.D. is 5″ greater „ which depends on B. F.

B.A.C. 6161. —The N.P.D. is 5″ „ „

B.A.C. 6196. —The N.P.D. is 24″ „ „ which depends on Bradley and Lalande.

B.A.C. 6260. —The N.P.D. is 30″ „ „ which depends on Lacaille, but nearly agrees with Oeltzen's Argelander.

B.A.C. 6295. —The N.P.D. is 29″ greater than that in the B.A.C., which depends on Lac.

B.A.C. 6327. —The N.P.D. is 32″ „ „ which depends on Lac.

B.A.C. 6422. —The N.P.D. is 15″ less „ which depends on Lac.

B.A.C. 6448. —The N.P.D. is 4″ greater „

B.A.C. 6450. —The N.P.D. is 4″ „ „

11 Aquilæ. —The N.P.D. is 7″ „ „

B.A.C. 6485. —The N.P.D. is 6″ „ „

B.A.C. 6527. —The N.P.D. is 12″ less „ which depends on Bradley and Bessel.

B.A.C. 6544. —The N.P.D. is 6″ greater „ which depends on B. F.

B.A.C. 6627. —The N.P.D. is 22″ „ „ which depends on Lacaille.

B.A.C. 6677. —The N.P.D. is 13″ „ „ which depends on Lacaille.

B.A.C. 6682. —The N.P.D. is 22″ „ „ See Notes to Cat. for 1863.

B.A.C. 6716. —The N.P.D. is about 15″ greater than that in the B.A.C., which depends on Lac.

46 Aquilæ. —The N.P.D. is 4″ greater than that in the B.A.C.

10 Vulpeculæ.—The N.P.D. is 4″ less „

B.A.C. 6776. —The N.P.D. is 5″ greater „

12 Vulpeculæ.—The N.P.D. is 4″ „ „

B.A.C. 6814. —The N.P.D. is 1′ 6″ „ „ which depends on Lacaille, but agrees with an observation of 1862.

B.A.C. 6815. —The N.P.D. is 8″ greater than that in the B.A.C., which depends on B.F., but agrees with the observations of 1863.
9 Sagittæ. —The N.P.D. is 5″ greater than that in the B.A.C.
B.A.C. 6854. —The N.P.D. is 17″ less „ which depends on Lacaille.
B.A.C. 6982. —The N.P.D. is 24″ greater „ which depends on Lacaille.
B.A.C. 6987. —The N.P.D. is 5″ „ „
B.A.C. 7019. —The N.P.D. is 5″ less „
B.A.C. 7026. —The N.P.D. is 28″ greater „ which depends on Lacaille.
B.A.C. 7030. —The N.P.D. is 17″ „ „ which depends on Lacaille.
B.A.C. 7034. —The N.P.D. is 30″ „ „ which depends on Lacaille, but nearly agrees with the observations of 1862.
68 Aquilæ. —The N.P.D. is 5″ greater than that in the B.A.C.
B.A.C. 7057. —The N.P.D. is 39″ „ „ which depends on Lacaille, but nearly agrees with an observation of 1862.
B.A.C. 7111. —The N.P.D. is 40″ greater than that in the B.A.C., which depends on Lac.
B.A.C. 7113. —The N.P.D. is 8″ „ „ which depends on Lac.
B.A.C. 7170. —The N.P.D. is 25″ less „ which depends on Lac., but nearly agrees with an observation of 1863.
B.A.C. 7172. —The N.P.D. is 5″ greater than that in the B.A.C., which depends on Zach,
B.A.C. 7180. —The N.P.D. is 5′ 40″ less „ which depends on Lac., but nearly agrees with Oeltzen's Argelander.
B.A.C. 7216. —The N.P.D. is 25″ greater than that in the B.A.C., which depends on Lac.
B.A.C. 7248. —The N.P.D. is 5″ less „ which depends on B.F.
33 Vulpeculæ.—The N.P.D. is 7″ greater „
16 Aquarii. —The N.P.D. is 4″ less „
18 Aquarii. —The N.P.D. is 6″ greater „
B.A.C. 7507. —The N.P.D. is 5″ „ „
B.A.C. 7528. —The N.P.D. is 30″ less „ which depends on B.F.
13 Pegasi. —The N.P.D. is 5″ greater than that in the B.A.C.
B.A.C. 7617. —The N.P.D. is 5″ „ „ which depends on B.F.
B.A.C. 7620. —The N.P.D. is 5″ „ „ which depends on B.F.
B.A.C. 7675. —The N.P.D. is 6″ „ „
B.A.C. 7697. —The N.P.D. is 5″ „ „ which depends on B.F.
B.A.C. 7739. —The N.P.D. is 7″ „ „
39 Aquarii. —The N.P.D. is 4″ less „
B.A.C. 7742. —The N.P.D. is 7″ „ „ which assumes a proper motion of +0″·11
B.A.C. 7757. —The N.P.D. is 5″ „ „
B.A.C. 7804. —The N.P.D. is 5″ greater „
B.A.C. 7920. —The N.P.D. is 5″ „ „
75 Aquarii. —The N.P.D. is 6″ „ „
B.A.C. 8017. —The N.P.D. is 5″ less „
B.A.C. 8091. —The N.P.D. is 8″ greater „ but agrees with an observation of 1863.
B.A.C. 8099. —The N.P.D. is 5″ less „
B.A.C. 8266. —The N.P.D. is 5″ greater „
B.A.C. 8297. —The N.P.D. is 7″ less „ but agrees with two observations of 1862.
82 Pegasi. —The N.P.D. is 4″ „ „
B.A.C. 8304. —The N.P.D. is 7″ „ „
B.A.C. 8335. —The N.P.D. is 6″ „ „

Errata in the preceding Catalogue:

Page 93. No. 341. 51 Geminorum.—The minutes of N.P.D. *should be* 36 *instead of* 26.
111. No. 953.—B.A.C. 6527, Mean N.P.D. 1864, Jan. 1, *for* 71° 4′ 28″·24 *read* 71° 3′ 28″·42.

HORIZONTAL AND VERTICAL DIAMETERS;

AND

RIGHT ASCENSIONS AND NORTH POLAR DISTANCES

OF THE

SUN, MOON, AND PLANETS:

(THE NORTH POLAR DISTANCES BEING CORRECTED FOR FLEXURE OF THE TELESCOPE OF THE TRANSIT CIRCLE, AND FOR ERROR OF COLATITUDE)

COMPARED WITH THE NAUTICAL ALMANAC.

THE SUN.

Sidereal Times occupied by the Transits of the Sun's Diameter; and Vertical Diameters of the Sun: compared with those of the Nautical Almanac.

Day, 1864.	Observer.	Observed Duration of Transit of Diameter.	Seconds of Nautical Almanac.	Apparent Error of Nautical Almanac.	Observed Vertical Diameter.	Seconds of Nautical Almanac.	Apparent Error of Nautical Almanac.
		m. s.	s.	s.	′ ″	″	″
Jan. 4	L	2 21·28	21·88	+ 0·60	32 37·76	36·40	− 1·36
5	Q	....	......	....	32 36·23	36·40	+ 0·17
6	L	2 21·29	21·66	+ 0·37	32 34·17	36·20	+ 2·03
7	Q	2 21·20	21·52	+ 0·32	32 38·29	36·20	− 2·09
19	Q	2 19·17	19·48	+ 0·31	32 28·86	34·80	+ 5·94
26	Q	2 17·87	17·98	+ 0·11	32 32·10	33·40	+ 1·30
28	Q	2 17·48	17·54	+ 0·06	32 30·07	33·00	+ 2·93
29	L	2 16·96	17·30	+ 0·34	32 27·59	32·60	+ 5·01
30	Q	2 16·99	17·08	+ 0·09	32 32·25	32·40	+ 0·15
Feb. 6	Q	2 15·34	15·46	+ 0·12	32 30·31	30·00	− 0·31
10	L	2 14·05	14·54	+ 0·49	32 24·29	28·60	+ 4·31
16	Q	2 13·11	13·26	+ 0·15	32 24·89	26·40	+ 1·51
17	L	2 12·46	13·06	+ 0·60	32 25·25	26·00	+ 0·75
18	Q	2 12·76	12·86	+ 0·10	32 28·49	25·60	− 2·89
19	L	2 12·17	12·66	+ 0·49	32 23·85	25·20	+ 1·35
24	Q	2 11·57	11·72	+ 0·15	32 22·51	23·00	+ 0·49
Mar. 10	Q	2 9·43	9·66	+ 0·23	32 12·53	15·40	+ 2·87
16	Q	2 9·23	9·18	− 0·05	32 11·03	12·20	+ 1·17
17	Q	2 8·99	9·12	+ 0·13	32 11·19	11·60	+ 0·41
18	L	2 8·98	9·08	+ 0·10	32 9·76	11·20	+ 1·44
19	Q	....	......	....	32 8·91	10·60	+ 1·69
24	Q	2 8·73	8·90	+ 0·17	32 9·14	7·80	− 1·34
Apr. 1	L	2 8·67	9·00	+ 0·33	32 1·89	3·40	+ 1·51
2	Q	2 8·86	9·04	+ 0·18	32 0·20	2·80	+ 2·60

Sidereal Times occupied by the Transits of the Sun's Diameter; and Vertical Diameters of the Sun: compared with those of the Nautical Almanac.

(continued.)

Day, 1864.	Observer.	Observed Duration of Transit of Diameter.	Seconds of Nautical Almanac.	Apparent Error of Nautical Almanac.	Observed Vertical Diameter.	Seconds of Nautical Almanac.	Apparent Error of Nautical Almanac.
		m. s.	s.	s.	′ ″	″	″
April 4	L	....	......	....	32 1·29	1·60	+ 0·31
12	Q	2 9·58	9·70	+ 0·12	31 55·24	57·40	+ 2·16
13	L	2 9·56	9·80	+ 0·24	31 55·81	56·80	+ 0·99
14	Q	2 9·81	9·90	+ 0·09	31 56·95	56·20	− 0·75
15	L	2 9·67	10·00	+ 0·33	31 57·21	55·80	− 1·41
18	L	2 9·81	10·34	+ 0·53	31 52·99	54·20	+ 1·21
19	Q	2 10·09	10·46	+ 0·37	31 50·22	53·60	+ 3·38
20	L	2 10·23	10·60	+ 0·37	31 56·46	53·20	− 3·26
21	Q	2 10·64	10·72	+ 0·08	31 51·92	52·60	+ 0·68
22	L	2 10·32	10·86	+ 0·54	51 51·78	52·20	+ 0·42
23	Q	2 11·17	10·98	− 0·19	31 49·66	51·60	+ 1·94
25	Q	2 11·29	11·26	− 0·03	....	......	....
29	L	2 11·76	11·86	+ 0·10	31 49·60	48·60	− 1·00
May 7	Q	2 13·19	13·12	− 0·07	31 43·84	44·80	+ 0·96
14	Q	2 14·24	14·28	+ 0·04	31 41·85	42·00	+ 0·15
18	Q	2 14·80	14·92	+ 0·12	31 40·38	40·60	+ 0·22
19	Q	2 15·08	15·08	0·00	31 37·79	40·20	+ 2·41
20	Q	2 15·48	15·24	− 0·24	31 39·04	39·80	+ 0·76
21	Q	2 15·19	15·40	+ 0·21	31 36·79	39·40	+ 2·61
24	Q	2 15·85	15·84	− 0·01	31 37·59	38·40	+ 0·81
27	Q	2 16·43	16·24	− 0·19	31 37·01	37·40	+ 0·39
28	Q	2 16·26	16·36	+ 0·10	31 35·87	37·20	+ 1·33
June 1	Q	2 16·94	16·84	− 0·10	31 34·03	36·00	+ 1·97
2	Q	2 16·42	16·96	+ 0·54	31 39·21	35·80	− 3·41
4	Q	2 17·67	17·16	− 0·51	31 34·43	35·20	+ 0·77
6	Q	2 17·12	17·34	+ 0·22	31 32·56	34·80	+ 2·24
7	Q	2 17·23	17·42	+ 0·19	31 33·53	34·60	+ 1·07
8	Q	2 18·11	17·50	− 0·61	31 37·65	34·40	− 3·25
10	Q	2 17·55	17·62	+ 0·07	31 32·86	34·00	+ 1·14
11	Q	2 17·85	17·68	− 0·17	31 31·96	33·80	+ 1·84
16	Q	2 17·90	17·90	0·00	31 33·06	33·00	− 0·06
18	Q	2 17·80	17·92	+ 0·12	31 33·96	32·80	− 1·16
20	Q	2 17·86	17·94	+ 0·08	31 29·15	32·60	+ 3·45
21	Q	2 17·92	17·92	0·00	31 28·95	32·40	+ 3·45
23	Q	2 17·87	17·90	+ 0·03	31 30·50	32·20	+ 1·70
July 2	Q	2 17·34	17·42	+ 0·08	31 29·00	31·80	+ 2·80
5	Q	2 16·96	17·16	+ 0·20	31 32·56	31·80	− 0·76
7	Q	2 16·96	16·96	0·00	31 32·09	32·00	− 0·09
8	Q	2 16·77	16·86	+ 0·09	31 28·32	32·00	+ 3·68

Sidereal Times occupied by the Transits of the Sun's Diameter; and Vertical Diameters of the Sun: compared with those of the Nautical Almanac,

(continued.)

Day, 1864.	Observer.	Observed Duration of Transit of Diameter.	Seconds of Nautical Almanac.	Apparent Error of Nautical Almanac.	Observed Vertical Diameter.	Seconds of Nautical Almanac.	Apparent Error of Nautical Almanac.
		m. s.	s.	s.	′ ″	″	″
July 9	Q	2 16·74	16·74	0·00	31 33·28	32·00	−1·28
11	Q	2 16·38	16·50	+0·12	31 34·02	32·20	−1·82
12	Q	2 16·44	16·36	−0·08	31 35·31	32·40	−2·91
14	Q	2 16·05	16·10	+0·05	31 35·25	32·60	−2·65
15	Q	2 16·18	15·96	−0·22	31 32·82	32·60	−0·22
16	Q	2 16·01	15·82	−0·19	31 33·86	32·80	−1·06
19	Q	2 15·40	15·36	−0·04	31 30·20	33·20	+3·00
20	Q	2 15·31	15·20	−0·11	31 31·31	33·40	+2·09
21	Q	2 15·09	15·04	−0·05	31 31·75	33·60	+1·85
23	Q	2 14·57	14·72	+0·15	31 34·39	33·80	−0·59
27	Q	2 14·13	14·04	−0·09	31 32·15	34·60	+2·45
29	Q	2 13·77	13·70	−0·07	31 33·65	35·00	+1·35
Aug. 3	Q	2 12·94	12·84	−0·10	31 36·46	36·40	−0·06
4	Q	2 12·57	12·66	+0·09	31 37·67	36·60	−1·07
5	Q	2 12·77	12·48	−0·29	31 32·56	37·00	+4·44
6	Q	2 12·39	12·32	−0·07	31 40·46	37·20	−3·26
11	Q	2 11·82	11·48	−0·34	31 47·66	38·80	(−8·86)
12	Q	2 11·07	11·32	+0·25	....	......	......
13	Q	2 11·16	11·16	0·00	31 40·82	39·60	−1·22
15	Q	2 11·10	10·86	−0·24	31 42·88	40·20	−2·68
16	Q	2 10·62	10·70	+0·08	31 37·39	40·60	+3·21
17	Q	2 10·46	10·56	+0·10	31 44·20	41·00	−3·20
18	Q	2 10·62	10·42	−0·20	31 38·49	41·40	+2·91
19	Q	2 10·01	10·26	+0·25	31 40·72	41·80	+1·08
27	Q	2 9·23	9·26	+0·03	31 42·80	45·00	+2·20
29	Q	2 8·71	9·04	+0·33	31 44·92	46·00	+1·08
30	Q	2 8·51	8·94	+0·43	31 44·84	46·40	+1·56
Sept. 5	Q	2 8·34	8·46	+0·12	31 47·47	49·20	+1·73
8	Q	2 8·13	8·30	+0·17	....	......	......
17	Q	....	......	......	31 56·06	55·40	−0·66
19	Q	....	......	......	31 52·59	56·40	+3·81
20	Q	2 8·00	8·14	+0·14	31 56·16	57·00	+0·84
26	Q	2 8·32	8·38	+0·06	31 56·79	60·20	+3·41
27	Q	2 8·46	8·44	−0·02	31 56·68	60·80	+4·12
28	Q	2 8·57	8·50	−0·07	....	......	......
29	Q	2 8·52	8·58	+0·06	31 58·39	61·80	+3·41
Oct. 3	Q	2 8·69	8·94	+0·25	32 2·93	4·00	+1·07
4	Q	2 8·92	9·04	+0·12	32 1·36	4·60	+3·24
5	Q	2 9·21	9·16	−0·05	32 3·37	5·20	+1·83

Sidereal Times occupied by the Transits of the Sun's Diameter; and Vertical Diameters of the Sun: compared with those of the Nautical Almanac,

(concluded.)

Day, 1864.	Observer.	Observed Duration of Transit of Diameter.	Seconds of Nautical Almanac.	Apparent Error of Nautical Almanac.	Observed Vertical Diameter.	Seconds of Nautical Almanac.	Apparent Error of Nautical Almanac.
		m. s.	s.	s.	′ ″	″	″
Oct. 6	Q	2 9·26	9·28	+0·02	32 1·70	5·80	+4·10
7	Q	2 9·29	9·40	+0·11	32 6·47	6·40	−0·07
8	Q	2 9·56	9·52	−0·04	32 5·37	7·00	+1·63
15	Q	2 10·41	10·56	+0·15	32 10·39	10·80	+0·41
26	L	2 11·94	12·68	+0·74	32 14·29	16·60	+2·31
Nov. 2	L	....	......	......	32 19·46	20·20	+0·74
3	L	2 14·33	14·46	+0·13	32 18·92	20·60	+1·68
7	L	2 14·95	15·42	+0·47	32 21·34	22·60	+1·26
10	Q	2 16·54	17·14	+0·60	32 25·71	24·00	−1·71
16	Q	2 17·33	17·56	+0·23	32 23·50	26·60	+3·10
25	Q	2 19·60	19·54	−0·06	32 28·97	30·00	+1·03
26	Q	2 19·38	19·74	+0·36	32 28·55	30·20	+1·65
29	Q	2 20·31	20·32	+0·01	32 28·28	31·20	+2·92
Dec. 5	Q	2 21·22	21·32	+0·10	32 32·04	33·00	+0·96
6	Q	2 21·46	21·46	0·00	32 27·84	33·20	+5·36
8	Q	2 21·81	21·72	−0·09	32 32·05	33·80	+1·75
9	Q	2 21·74	21·84	+0·10	32 29·61	34·00	+4·39
21	Q	2 22·32	22·58	+0·26	32 30·71	36·00	+5·29

Sidereal Times occupied by the Transits of the Moon's Diameter; and Vertical Diameters of the Moon.

Day, 1864.	Observer.	Observed Duration of Transit of Diameter.	Seconds of Nautical Almanac.	Apparent Error of Nautical Almanac.	Observed Vertical Diameter.	Seconds of Nautical Almanac.	Apparent Error of Nautical Almanac.
		m. s.	s.	s.	′ ″	″	″
Apr. 21	Q	2 11·13	10·90	−0·23	30 45·71	42·38	−3·33
May 20	Q	....	......	......	31 28·70	24·60	−4·10
July 16	Q	....	......	......	32 18·62	18·10	−0·52
Aug. 13	Q	....	......	......	32 13·49	14·80	+1·31
16	Q	2 22·26	22·26	0·00	33 21·70	26·38	+4·68
Sept. 14	Q	....	......	......	33 29·42	28·86	−0·56
Oct. 7	Q	....	......	......	31 16·71	27·36	(+10·65)
14	Q	....	......	......	33 3·34	4·62	+1·28
Nov. 12	Q	2 20·06	19·96	−0·10	32 27·01	27·12	+0·11
Dec. 12	Q	2 18·94	18·86	−0·08	31 25·93	24·00	−1·93

Vertical Diameters of Mercury.

Day, 1864.	Observer.	Observed Vertical Diameter.	Seconds of Nautical Almanac.	Apparent Error of Nautical Almanac.
		"	"	"
Apr. 22	L	9·13	6·40	— 2·73
23	Q	11·66	6·60	— 5·06

Vertical Diameters of Venus.

Day, 1864.	Observer.	Observed Vertical Diameter.	Seconds of Nautical Almanac.	Apparent Error of Nautical Almanac.	Day, 1864.	Observer.	Observed Vertical Diameter.	Seconds of Nautical Almanac.	Apparent Error of Nautical Almanac.
		"	"	"			"	"	"
Jan. 3	L	23·81	18·80	— 5·01	July 4	Q	10·20	9·60	— 0·60
25	L	19·41	16·20	— 3·21	Aug. 4	Q	9·83	9·60	— 0·23
27	L	17·54	16·00	— 1·54	5	Q	11·61	9·60	— 2·01
Feb. 3	L	17·82	15·10	— 2·72	6	Q	9·86	9·60	— 0·26
9	L	17·53	14·70	— 2·83	11	Q	11·59	9·60	— 1·99
16	L	17·33	14·00	— 3·33	12	Q	10·03	9·60	— 0·43
Mar. 11	Q	17·00	12·60	— 4·40	13	Q	11·01	9·60	— 1·41
15	Q	16·10	12·40	— 3·70	15	Q	10·98	9·60	— 1·38
17	Q	15·15	12·20	— 2·95	18	Q	10·19	9·60	— 0·59
23	Q	11·53	11·80	+ 0·27	26	Q	13·56	9·80	— 3·76
31	Q	13·55	11·60	— 1·95	27	Q	12·49	9·80	— 2·69
Apr. 11	Q	15·10	11·20	— 3·90	30	Q	10·52	9·80	— 0·72
13	Q	15·35	11·10	— 4·25	Sept. 15	Q	10·85	10·20	— 0·65
14	Q	12·05	11·00	— 1·05	26	Q	11·40	10·40	— 1·00
17	L	14·09	10·90	— 3·19	27	Q	10·30	10·40	+ 0·10
18	L	12·76	10·80	— 1·96	28	Q	11·36	10·40	— 0·96
19	Q	11·81	10·80	— 1·01	29	Q	12·11	10·40	— 1·71
20	Q	13·87	10·80	— 3·07	Oct. 3	Q	8·95	10·60	+ 1·65
21	Q	21·63	10·80	(—10·83)	5	Q	12·03	10·60	— 1·43
22	Q	13·17	10·80	— 2·37	6	Q	11·49	10·60	— 0·89
28	Q	10·96	10·60	— 0·36	7	Q	9·83	10·60	+ 0·77
May 13	Q	8·46	10·20	+ 1·74	8	Q	10·83	10·70	— 0·13
19	Q	9·58	10·00	+ 0·42	31	L	11·48	11·40	— 0·08
23	Q	12·66	10·00	— 2·66	Nov. 4	L	13·32	11·60	— 1·72
27	Q	10·19	9·80	— 0·39	10	Q	11·26	11·80	+ 0·54
June 8	Q	12·48	9·80	— 2·68	25	Q	13·88	12·40	— 1·48
17	Q	9·78	9·60	— 0·18	29	Q	13·92	12·70	— 1·22
19	Q	10·71	9·60	— 1·11	Dec. 1	L	18·02	12·80	(— 5·22)

Sidereal Times occupied by the Transits of the Diameter of Mars; and Vertical Diameters of Mars.

Day, 1864.	Observer.	Observed Duration of Transit of Diameter.	Seconds of Nautical Almanac.	Apparent Error of Nautical Almanac.	Observed Vertical Diameter.	Seconds of Nautical Almanac.	Apparent Error of Nautical Almanac.
		s.	s.	s.	"	"	"
Nov. 28	Q	1·61	1·20	— 0·41	20·21	16·40	— 3·81
29	Q	1·64	1·20	— 0·44	20·89	16·40	— 4·49
30	Q	1·61	1·20	— 0·41	22·54	16·40	— 6·14
Dec. 1	Q	......	......	......	20·12	16·40	— 3·72
8	Q	1·40	1·18	— 0·22	21·75	16·00	— 5·75
12	Q	1·73	1·14	— 0·59	19·87	15·60	— 4·27

Sidereal Times occupied by the Transits of the Diameters of Jupiter; and Vertical Diameters of Jupiter.

Day, 1864.	Observer.	Observed Duration of Transit of Diameter.	Seconds of Nautical Almanac.	Apparent Error of Nautical Almanac.	Observed Vertical Diameter.	Seconds of Nautical Almanac.	Apparent Error of Nautical Almanac.
		s.	s.	s.	"	"	"
Jan. 3	L	1·99	2·32	+ 0·33	22·02	31·40	(+ 9·38)
May 7	Q	3·42	3·18	— 0·24	47·04	42·00	— 5·04
13	L	3·15	3·16	+ 0·01	44·01	42·20	— 1·81
18	Q	3·37	3·16	— 0·21	44·52	42·00	— 2·52
20	Q	3·62	3·16	— 0·46	48·56	42·00	— 6·56
24	Q	3·21	3·16	— 0·05	48·02	42·00	— 6·02
26	Q	3·41	3·16	— 0·25	45·27	42·00	— 3·27
27	Q	3·15	3·16	+ 0·01	46·64	42·00	— 4·64
30	Q	3·32	3·15	— 0·17	47·07	41·90	— 5·17
June 3	Q	3·28	3·13	— 0·15	43·79	41·60	— 2·19
6	Q	2·98	3·12	+ 0·14	43·72	41·70	— 2·02
7	Q	3·00	3·11	+ 0·11	44·46	41·50	— 2·96
8	Q	3·35	3·10	— 0·25	46·65	41·40	— 5·25
10	Q	2·90	3·10	+ 0·20	45·60	41·20	— 4·40
11	Q	3·00	3·09	+ 0·09	44·00	41·10	— 2·90
13	Q	3·01	3·08	+ 0·07	44·40	41·00	— 3·40
15	Q	3·00	3·07	+ 0·07	44·08	40·90	— 3·18
21	Q	3·05	3·03	— 0·02	43·83	40·30	— 3·53
23	Q	2·98	3·01	+ 0·03	45·17	40·10	— 5·07
27	Q	2·90	2·97	+ 0·07	43·76	39·70	— 4·06
30	Q	2·78	2·96	+ 0·18	41·05	39·60	— 1·45
July 5	Q	2·81	2·92	+ 0·11	42·68	39·10	— 3·58

Sidereal Times occupied by the Transits of the Diameters of Saturn; and Vertical Diameters of Saturn.

Day, 1864.	Observer.	Observed Duration of Transit of Diameter.	Seconds of Nautical Almanac.	Apparent Error of Nautical Almanac.	Observed Vertical Diameter.	Seconds of Nautical Almanac.	Apparent Error of Nautical Almanac.
		s.	s.	s.	″	″	″
Jan. 1	L	0·79	1·12	+0·33	19·98	15·60	−4·38
Mar. 29	Q	1·12	1·24	+0·12	20·35	17·40	−2·95
30	L	1·17	1·24	+0·07	18·50	17·40	−1·10
Apr. 1	L	1·33	1·24	−0·09	18·74	17·40	−1·34
13	L	1·05	1·24	+0·19	20·36	17·40	−2·96
14	Q	1·06	1·24	+0·18	21·06	17·40	−3·66
18	L	1·21	1·24	+0·03	19·13	17·40	−1·73
19	Q	0·93	1·24	+0·31	19·72	17·30	−2·42
20	L	1·21	1·24	+0·03	18·69	17·20	−1·49
21	Q	1·59	1·24	−0·35	19·96	17·20	−2·76
23	Q	1·24	1·24	0·00	19·73	17·20	−2·53
25	L	1·16	1·24	+0·08	20·40	17·20	−3·20
29	L	1·04	1·24	+0·20	18·07	17·20	−0·87
May 5	Q	1·14	1·24	+0·10	20·30	17·00	−3·30
7	Q	1·34	1·24	−0·10	20·44	17·00	−3·44
13	L	1·00	1·23	+0·23	17·30	16·90	−0·40
14	Q	1·15	1·22	+0·07	20·54	16·80	−3·74
18	Q	1·07	1·22	+0·15	20·48	16·80	−3·68
24	Q	1·14	1·20	+0·06	19·31	16·60	−2·71
27	Q	1·19	1·20	+0·01	20·04	16·60	−3·44

Right Ascensions and North Polar Distances of the Centre of the Sun.

Oxford Mean Solar Time of Transit of Centre.				Observer.	R.A. from Observation.			Seconds of Tabular R.A.	Apparent Error of Tabular R.A.	N.P.D. from Observation.			Seconds of Tabular N.P.D.	Apparent Error of Tabular N.P.D.
1864. d.	h.	m.	s.		h.	m.	s.	s.	s.	°	′	″	″	″
Jan. 4	0	5	2·0	L	18	58	30·66	30·26	−0·40	112	46	22·89	26·11	+3·22
5	0	5	29·3	Q	19	2	54·54	54·20	−0·34	112	40	1·85	3·31	+1·46
6	0	5	56·2	L	19	7	17·97	17·72	−0·25	112	33	12·75	13·62	+0·87
7	0	6	22·7	Q	19	11	40·90	40·79	−0·11	112	25	54·60	57·03	+2·43
19	0	10	54·4	Q	20	3	32·40	31·95	(−0·45)	110	25	23·33	25·48	+2·15
26	0	12	45·3	Q	20	32	58·95	59·02	+0·07	108	49	2·92	1·54	−1·48
28	0	13	9·8	Q	20	41	16·78	16·76	−0·03	108	18	16·96	18·40	+1·44
29	0	13	20·9	L	20	45	24·90	24·42	−0·48	108	2	22·54	26·93	+4·39
30	0	13	31·2	Q	20	49	31·39	31·26	−0·13	107	46	14·50	15·97	+1·47
Feb. 6	0	14	20·6	Q	21	17	56·85	56·75	−0·10	105	44	25·51	28·14	+2·63
10	0	14	31·2	L	21	33	53·80	53·59	−0·21	104	28	46·40	48·33	+1·93
16	0	14	23·5	Q	21	57	25·14	25·11	−0·03	102	28	12·61	15·64	+3·03
17	0	14	19·5	L	22	1	18·21	17·71	−0·50	102	7	27·31	26·30	−1·01
18	0	14	14·9	Q	22	5	9·53	9·59	+0·06	101	46	23·06	25·36	+2·30
19	0	14	9·5	L	22	9	1·20	0·77	−0·43	101	25	13·47	13·53	+0·06
24	0	13	32·6	Q	22	28	6·76	6·55	−0·21	99	36	39·14	41·96	+2·82
Mar. 10	0	10	21·9	Q	23	24	3·71	3·59	−0·12	93	52	35·39	35·66	+0·27
16	0	8	41·6	Q	23	46	2·51	2·33	−0·18	91	30	48·73	47·82	−0·91
17	0	8	24·0	Q	23	49	41·43	41·24	−0·19	91	7	5·57	5·92	+0·35
18	0	8	6·2	L	23	53	20·35	19·94	−0·41	90	43	22·16	24·02	+1·86
19	0	7	48·2	Q	23	56	58·56	58·46	−0·10	90	19	41·04	42·24	+1·20
24	0	6	16·5	Q	0	15	9·53	9·23	−0·30	88	21	29·10	28·85	−0·25
Apr. 1	0	3	49·1	L	0	44	14·36	13·80	−0·56	85	14	32·02	34·35	+2·33
2	0	3	31·0	Q	0	47	52·34	52·27	−0·07	84	51	33·06	31·47	−1·59
4	0	2	55·4	L	0	55		......	......	84	5	40·28	42·01	+1·73
12	0	0	41·6	Q	1	24	27·90	27·94	+0·04	81	6	57·05	57·42	+0·37
13	0	0	26·1	L	1	28	9·36	8·91	−0·45	80	45	11·35	13·35	+2·00
14	0	0	10·8	Q	1	31	50·11	50·20	+0·09	80	23	37·41	38·58	+1·17
14	23	59	55·9	L	1	35	32·39	31·91	−0·48	80	2	10·13	13·41	+3·28
17	23	59	13·3	L	1	46	38·99	38·76	−0·23	78	58	54·84	58·72	+3·88
18	23	58	59·9	Q	1	50	21·95	21·83	−0·12	78	38	17·27	15·06	−2·21
19	23	58	46·9	L	1	54	5·76	5·33	−0·43	78	17	40·93	42·80	+1·87
20	23	58	34·3	Q	1	57	49·49	49·28	−0·21	77	57	22·81	21·94	−0·87
21	23	58	22·1	L	2	1	33·89	33·61	−0·28	77	37	11·11	12·99	+1·88
22	23	58	10·4	Q	2	5	18·79	18·42	−0·37	77	17	16·08	16·13	+0·05
24	23	57	48·4	Q	2	12	49·45	49·51	+0·06	76	38		......	......
28	23	57	10·6	L	2	27	58·11	57·92	−0·19	75	22	5·62	7·11	+1·49
May 6	23	56	21·5	Q	2	58	41·17	40·99	−0·18	73	2	13·93	11·95	−1·98
13	23	56	8·1	Q	3	26	3·92	3·45	−0·47	71	14	29·45	28·86	−0·59

Jan. 5 and Mar. 19. The 2nd L. only in R.A.
Jan. 19, Feb. 6, and April 2. No clock-error for the day of observation.

Right Ascensions and North Polar Distances of the Centre of the Sun,

(continued.)

Oxford Mean Solar Time of Transit of Centre.	Observer.	R.A. from Observation.	Seconds of Tabular R.A.	Apparent Error of Tabular R.A.	N.P.D. from Observation.	Seconds of Tabular N.P.D.	Apparent Error of Tabular N.P.D.
1864. d. h. m. s.		h. m. s.	s.	s.	° ′ ″	″	″
May 17 23 56 12·6	Q	3 41 54·39	54·20	−0·19	70 19 50·24	47·07	−3·17
18 23 56 15·1	Q	3 45 53·44	53·26	−0·18	70 6 59·58	56·04	−3·54
19 23 56 18·1	Q	3 49 52·96	52·84	−0·12	69 54 25·66	25·41	−0·25
20 23 56 21·7	Q	3 53 53·08	52·98	−0·10	69 42 17·82	15·18	−2·64
23 23 56 35·6	Q	4 5 56·70	56·58	−0·12	69 7 50·95	50·20	−0·75
26 23 56 54·1	Q	4 18 5·02	4·83	−0·19	68 36 41·67	38·33	−3·34
27 23 57 1·3	Q	4 22 8·82	8·58	−0·24	68 26 57·81	58·30	+0·49
31 23 57 34·6	Q	4 38 28·27	28·20	−0·07	67 52 8·48	3·83	−4·65
June 1 23 57 44·0	Q	4 42 34·31	34·17	−0·14	67 44 20·58	17·71	−2·87
3 23 58 4·0	Q	4 50 47·16	47·28	+0·12	67 29 54·92	55·17	+0·25
5 23 58 25·3	Q	4 59 1·79	1·76	−0·03	67 17 8·94	6·94	−2·00
6 23 58 36·4	Q	5 3 9·45	9·45	0·00	67 11 20·85	18·62	−2·23
7 23 58 47·8	Q	5 7 17·47	17·41	−0·06	67 5 52·99	54·20	+1·21
9 23 59 11·2	Q	5 15 34·03	34·06	+0·03	66 56 19·23	17·97	−1·26
10 23 59 23·2	Q	5 19 42·67	42·68	+0·01	66 52 5·58	6·26	+0·68
16 0 0 25·7	Q	5 40 28·39	28·10	−0·29	66 37 18·66	15·89	−2·77
18 0 0 51·4	Q	5 48 47·17	46·93	−0·24	66 34 12·26	12·17	−0·09
20 0 1 17·1	Q	5 57 6·14	5·88	−0·26	66 32 53·02	48·04	−4·98
21 0 1 30·0	Q	6 1 15·70	15·36	−0·34	66 32 44·31	43·03	−1·28
23 0 1 55·7	Q	6 9 34·02	34·20	+0·18	66 33 51·47	47·50	−3·97
July 2 0 3 45·4	Q	6 46 53·13	53·26	+0·13	66 58 59·22	58·67	−0·55
5 0 4 17·9	Q	6 59 15·44	15·53	+0·09	67 14 42·88	39·72	−3·16
7 0 4 37·9	Q	7 7 28·31	28·65	+0·34	67 27 7·20	5·79	−1·41
8 0 4 47·3	Q	7 11 34·74	34·64	−0·10	67 33 54·86	53·97	−0·89
9 0 4 56·2	Q	7 15 40·27	40·20	−0·07	67 41 6·58	5·37	−1·21
11 0 5 12·9	Q	7 23 50·07	50·01	−0·06	67 56 36·33	37·21	+0·88
12 0 5 20·5	Q	7 27 54·40	54·21	−0·19	68 4 57·95	57·29	−0·66
14 0 5 34·3	Q	7 36 1·36	1·18	−0·18	68 22 45·36	44·56	−0·80
15 0 5 40·5	Q	7 40 3·63	3·91	+0·28	68 32 10·03	11·42	+1·39
16 0 5 46·1	Q	7 44 6·07	6·12	+0·05	68 42 1·39	0·20	−1·19
19 0 5 59·8	Q	7 56 9·62	9·51	−0·11	69 13 35·67	35·52	−0·15
20 0 6 3·3	Q	8 0 9·67	9·56	−0·11	69 24 49·64	49·60	−0·04
21 0 6 6·2	Q	8 4 9·10	9·04	−0·06	69 36 24·62	24·47	−0·15
23 0 6 10·4	Q	8 12 6·43	6·32	−0·11	70 0 36·92	35·70	−1·22
27 0 6 11·9	Q	8 27 54·16	54·13	−0·03	70 52 56·63	57·48	+0·85
29 0 6 9·3	Q	8 35 44·61	44·55	−0·06	71 21 3·14	3·51	+0·37
Aug. 3 0 5 22·3	Q	8 55 10·35	10·26	−0·09	72 36 35·67	35·73	+0·06
4 0 5 47·0	Q	8 59 1·80	1·60	−0·20	72 52 34·08	34·19	+0·11

June 18. No clock-error for the day of observation.

Right Ascensions and North Polar Distances of the Centre of the Sun,

(continued.)

Oxford Mean Solar Time of Transit of Centre.	Observer.	R.A. from Observation.	Seconds of Tabular R.A.	Apparent Error of Tabular R.A.	N.P.D. from Observation.	Seconds of Tabular N.P.D.	Apparent Error of Tabular N.P.D.
1864. d. h. m. s.		h. m. s.	s.	s.	° ′ ″	″	″
Aug. 5 0 5 41·2	Q	9 2 52·24	52·32	+0·08	73 8 51·04	49·24	−1·80
6 0 5 34·8	Q	9 6 42·47	42·42	−0·05	73 25 20·62	20·60	−0·02
11 0 4 53·7	Q	9 25 44·28	44·01	−0·27	74 51 54·28	51·16	−3·12
12 0 4 43·8	Q	9 29 30·46	30·57	+0·11	75 9 54·38	53·91	−0·47
13 0 4 33·2	Q	9 33 16·57	16·56	−0·01	75 28 11·89	10·74	−1·15
15 0 4 10·5	Q	9 40 46·88	46·88	0·00	76 5 28·07	25·56	−2·51
16 0 3 58·3	Q	9 44 31·41	31·22	−0·19	76 24 20·40	23·00	+2·60
17 0 3 45·6	Q	9 48 15·08	15·03	−0·05	76 43 33·70	33·35	−0·35
18 0 3 32·4	Q	9 51 58·41	58·34	−0·07	77 2 56·45	56·29	−0·16
19 0 3 18·7	Q	9 55 41·08	41·15	+0·07	77 22 32·05	31·67	−0·38
24 0 2 3·5	Q	10 14 8·74	8·51	−0·23	79 3	......	......
26 0 1 30·5	Q	10 21 28·69	28·58	−0·11	79 45 2·59	0·71	−1·88
27 0 1 13·5	Q	10 25 8·23	8·07	−0·16	80 6 3·22	4·04	+0·82
29 0 0 38·4	Q	10 32 25·66	25·97	(+0·31)	80 48 33·67	38·91	(+5·24)
30 0 0 20·4	Q	10 36 4·34	4·42	+0·08	81 10 10·37	9·74	−0·63
Sept. 4 23 58 25·9	Q	10 57 49·12	48·91	−0·21	83 22 1·46	1·59	+0·13
7 23 57 25·3	Q	11 8 38·14	37·88	−0·26	84 29 28·89	29·56	+0·67
16 23 54 16·3	Q	11 40 57·23	57·26	+0·03	87 56 14·79	14·38	−0·41
18 23 53 33·9	Q	11 48 8·11	7·85	−0·26	88 42 48·62	48·10	−0·52
19 23 53 12·8	Q	11 51 43·50	43·24	−0·26	89 6 7·65	8·10	+0·45
25 23 51 8·8	Q	12 13 18·36	18·24	−0·12	91 26 34·08	31·62	−2·46
26 23 50 48·7	Q	12 16 54·87	54·70	−0·17	91 49 59·12	56·12	−3·00
27 23 50 28·9	Q	12 20 31·35	31·38	+0·03	92 13	......	......
28 23 50 9·4	Q	12 24 8·54	8·32	−0·22	92 36 43·42	42·41	−1·01
Oct. 2 23 48 53·9	Q	12 38 38·86	38·87	+0·01	94 9 54·92	53·68	−1·24
3 23 48 35·8	Q	12 42 17·47	17·31	−0·16	94 33 3·61	4·97	+1·36
4 23 48 18·1	Q	12 45 56·04	56·10	+0·06	94 56 15·04	12·95	−2·09
5 23 48 0·8	Q	12 49 35·26	35·25	−0·01	95 19 18·42	17·04	−1·38
6 23 47 43·8	Q	12 53 14·63	14·80	+0·17	95 42 19·85	17·12	−2·73
7 23 47 27·3	Q	12 56 54·76	54·74	−0·02	96 5 15·19	12·61	−2·58
14 23 45 44·2	Q	13 22 47·27	47·23	−0·04	98 43 5·72	4·56	−1·16
25 23 44 1·0	L	14 4 26·39	25·89	−0·50	102 38 4·90	5·40	+0·50
Nov. 1 23 43 41·4	L	14 31 42·40	42·05	−0·35	104 55 51·46	54·07	+2·61
2 23 43 41·7	L	14 35 39·43	38·96	−0·47	105 14 38·88	40·11	+1·23
3 23 43 42·9	L	14 39 37·27	36·69	−0·58	105 33 11·94	11·16	−0·78
6 23 43 51·3	L	14 51 34·98	34·74	−0·24	106 27 9·05	9·79	+0·74

Aug. 12 and Nov. 3. 23^h. The N.L. only in N.P.D. Aug. 24 and 26. The 2nd L. only in R.A. Aug. 26 and Sept. 7. 23^h. The S.L. only in N.P.D. Sept. 16. 23^h, 18. 23^h, Nov. 1. 23^h, and 3. 23^h. The 1st L. only in R.A.

Right Ascensions and North Polar Distances of the Centre of the Sun,

(concluded.)

Oxford Mean Solar Time of Transit of Centre.	Observer.	R.A. from Observation.	Seconds of Tabular R.A.	Apparent Error of Tabular R.A.	N.P.D. from Observation.	Seconds of Tabular N.P.D.	Apparent Error of Tabular N.P.D.
1864. d. h. m. s.		h. m. s.	s.	s.	° ′ ″	″	″
Nov. 9 23 44 7·0	Q	15 3 40·33	40·19	−0·14	107 18 35·63	37·91	+2·28
11 23 44 21·6	Q	15 11 48·15	47·98	−0·17	107 51 27·95	27·99	+0·04
13 23 44 39·7	Q	15 19 59·47	59·18	−0·29	108 23 3·29	3·35	+0·06
15 23 45 1·1	Q	15 28 14·13	13·78	−0·35	108 53 19·38	21·22	+1·84
24 23 47 18·8	Q	16 6 0·98	0·83	−0·15	110 52 21·67	20·12	−1·55
25 23 47 38·1	Q	16 10 16·72	16·71	−0·01	111 3 41·55	40·84	−0·71
28 23 48 40·2	Q	16 23 8·94	8·74	−0·20	111 35 18·96	19·19	+0·23
Dec. 4 23 51 2·0	Q	16 49 10·24	10·30	+0·06	112 27 22·02	21·45	−0·57
5 23 51 27·6	Q	16 53 32·54	32·50	−0·04	112 34 30·08	31·16	+1·08
7 23 52 20·2	Q	17 2 18·47	18·34	−0·13	112 47 30·80	30·77	−0·03
8 23 52 47·2	Q	17 6 41·81	41·92	+0·11	112 53 22·43	20·28	−2·15
20 23 58 34·5	Q	17 59 48·87	48·95	+0·08	113 27 13·69	16·90	+3·21

Nov. 11 and 13 at 23^h. The 1st L. only in R.A.

Right Ascensions and North Polar Distances of the Centre of the Moon.

Oxford Mean Solar Time of Transit of Centre.	Observer.	R.A. from Observation.	Seconds of Tabular R.A.	Apparent Error of Tabular R.A.	N.P.D. from Observation.	Seconds of Tabular N.P.D.	Apparent Error of Tabular N.P.D.
1864. d. h. m. s.		h. m. s.	s.	s.	° ′ ″	″	″
Jan. 1 17 47 25·5	L	12 31 58·62	58·60	−0·02	97 31 40·03	39·71	−0·32
3 19 22 18·5	L	14 15 0·32	0·51	+0·19	105 26 4·01	4·28	+0·27
16 6 29 44·3	Q	2 11 34·42	34·13	−0·29	74 52 19·16	21·32	+2·16
Feb. 14 6 6 1·6	L	3 42 8·15	7·46	−0·69	70 44 35·58	36·64	+1·06
15 6 56 58·3	L	4 37 9·56	9·03	−0·53	69 27 30·13	29·84	−0·29
16 7 47 8·0	Q	5 31 24·06	23·87	−0·19	69 15 28·93	27·98	−0·95
17 8 36 7·3	L	6 24 27·92	27·30	−0·62	70 5 15·96	17·77	+1·81
18 9 23 36·0	Q	7 16 1·03	0·75	−0·28	71 51 21·04	15·23	−5·81
Mar. 16 7 19 31·7	L	6 58 3·19	2·40	−0·79	71 21 22·67	25·20	+2·53
17 8 6 4·2	Q	7 48 39·93	39·63	−0·30	73 38 25·02	26·62	+1·60
18 8 50 54·9	L	8 37 34·54	33·83	−0·71	76 37 50·31	51·42	+1·11
19 9 34 23·4	Q	9 25 6·78	6·48	−0·30	80 10 59·19	62·22	+3·03
20 10 17 1·2	L	10 11 48·13	47·47	−0·66	84 9 18·64	19·39	+0·75
23 12 25 49·4	L	12 32 47·09	46·95	−0·14	97 2 58·01	57·13	−0·88
Apr. 11 4 22 7·6	L	5 42 40·37	39·67	−0·70	69 46(26·59)	45·43	(+18·84)
12 5 12 17·5	Q	6 36 54·99	54·64	−0·35	70 50 34·47	32·19	−2·28
13 6 0 14·7	L	7 28 56·71	56·09	−0·62	72 49 22·85	24·07	+1·22

April 11. The observation in N.P.D. is unaccountably in error. Bisections with accordant results were made at four vertical wires. The limb observed (the S.L.) was faint.

Right Ascensions and North Polar Distances of the Centre of the Moon,
(continued.)

Oxford Mean Solar Time of Transit of Centre.	Observer.	R.A. from Observation.	Seconds of Tabular R.A.	Apparent Error of Tabular R.A.	N.P.D. from Observation.	Seconds of Tabular N.P.D.	Apparent Error of Tabular N.P.D.
1864. d. h. m. s.		h. m. s.	s.	s.	° ′ ″	″	″
Apr. 14 6 46 4·1	Q	8 18 50·09	49·55	−0·54	75 33 50·72	48·14	−2·58
18 9 37 49·8	L	11 26 50·24	49·71	−0·53	91 8 18·39	15·95	−2·44
19 10 21 16·5	Q	12 14 20·71	20·61	−0·10	95 27 53·02	49·07	−3·95
20 11 6 22·9	L	13 3 31·07	30·72	−0·35	99 37 51·98	52·51	+0·53
21 11 53 44·4	Q	13 54 56·88	56·84	−0·04	103 25 44·94	41·38	−3·56
22 12 43 45·6	L	14 49 2·73	2·69	−0·04	106 36 52·56	51·08	−1·48
May 13 6 7 52·9	L	9 34 52·79	52·34	−0·45	81 9 32·91	35·80	+2·89
14 6 50 15·0	Q	10 21 18·36	17·88	−0·48	85 9 24·66	21·67	−2·99
17 8 59 9·9	M	12 42 24·10	23·88	−0·22	97 54 46·44	43·29	−3·15
18 9 45 28·9	Q	13 32 47·30	47·15	−0·15	101 53 14·80	13·50	−1·30
19 10 34 38·1	Q	14 26 1·10	1·02	−0·08	105 22	......	......
20 11 26 55·6	Q	15 22 23·70	23·80	+0·10	108 6 61·04	58·62	−2·42
June 10 4 45 30·1	Q	10 2 40·00	39·69	−0·31	83 25 16·41	13·06	−3·35
13 6 52 14·1	Q	12 21 34·46	34·33	−0·13	96 1 51·72	50·31	−1·41
15 8 24 1·3	Q	14 1 29·88	29·87	−0·01	103 48 14·34	12·45	−1·89
16 9 14 26·5	Q	14 55 59·90	59·76	−0·14	106 54 56·78	54·31	−2·47
July 11 5 30 46·5	Q	12 50 17·06	17·01	−0·05	98 16 38·99	36·41	−2·58
12 6 15 48·2	Q	13 39 22·74	22·67	−0·07	102 5 26·80	28·01	+1·21
13 7 3 35·1	Q	14 31 14·03	13·73	−0·30	105 26 15·46	14·85	−0·61
14 7 54 40·9	Q	15 26 24·85	24·58	−0·27	108 5 8·06	6·14	−1·92
15 8 49 15·4	Q	16 25 4·87	4·80	−0·07	109 46 25·57	23·47	−2·10
16 9 46 51·1	Q	17 26 46·52	46·25	−0·27	110 14 61·09	54·73	−6·36
Aug. 10 5 45 40·9	Q	15 3 30·61	30·63	+0·02	106 51 18·10	15·83	−2·27
11 6 37 8·1	Q	15 59 2·80	2·51	−0·29	108 56 18·91	16·39	−2·52
12 7 31 39·9	Q	16 57 40·10	40·18	+0·08	109 59 22·56	20·78	−1·78
13 8 28 46·2	Q	17 58 52·41	52·15	−0·26	109 48 12·75	10·37	−2·38
16 11 24 42·6	Q	21 7 7·38	7·11	−0·27	101 18 45·79	45·36	−0·43
Sept. 10 7 13 5·8	Q	....	......	......	108 54 60·21	56·64	−3·57
13 10 3 37·4	Q	21 36 12·32	12·12	−0·20	99 0 56·97	55·79	−1·18
14 10 59 39·8	Q	22 36 20·47	20·37	−0·10	93 57 53·55	51·92	−1·63
Oct. 6 4 11 56·1	Q	17 14 13·92	13·99	+0·07	109 40	......	......
7 5 6 0·5	Q	18 12 23·73	23·63	−0·10	109 12 11·39	10·94	(−0·45)
14 11 28 27·6	Q	1 3 29·56	29·66	+0·10	81 9 27·14	27·82	+0·68
Nov. 7 6 37 3·4	L	21 45 54·73	54·55	−0·18	98 6	......	......

April 21 and Aug. 16. Both limbs observed in R.A. and N.P.D.

May 20, July 16, Aug. 13, Sept. 14, Oct. 7, and Oct. 14. Both limbs observed in N.P.D.

Oct. 7. The observed diameter in N.P.D. is very discordant, so that the resulting N.P.D. of the centre is questionable. The observation is marked unsatisfactory.

Nov. 7. The observation in N.P.D. differs from the Nautical Almanac, in some unaccountable manner, nearly 4 minutes.

Right Ascensions and North Polar Distances of the Centre of the Moon,
(concluded.)

Oxford Mean Solar Time of Transit of Centre.	Observer.	R.A. from Observation.	Seconds of Tabular R.A.	Apparent Error of Tabular R.A.	N.P.D. from Observation.	Seconds of Tabular N.P.D.	Apparent Error of Tabular N.P.D.
1864. d. h. m. s.		h. m. s.	s.	s.	° ′ ″	″	″
Nov. 8 7 29 15·1	L	22 42 11·61	11·08	−0·53	93 21 6·78	6·66	−0·12
10 9 14 31·4	Q	0 35 38·33	38·38	+0·05	83 24 8·87	10·00	+1·13
12 11 4 10·7	Q	2 33 28·72	28·57	−0·15	75 3 52·38	53·57	+1·19
Dec. 5 5 26 5·5	Q	22 25 8·67	8·87	+0·20	94 56 22·13	20·45	−1·68
6 6 17 16·2	Q	23 20 24·44	24·40	−0·04	90 3 59·40	59·20	−0·20
8 8 0 24·9	Q	1 11 43·21	43·11	−0·10	80 35 21·31	20·54	−0·77
9 8 53 33·8	Q	2 9	......	......	76 33 57·27	56·63	−0·64
12 11 38 59·8	Q	5 6 40·27	40·20	−0·07	70 21 15·84	15·68	−0·16

Nov. 12 and Dec. 12. Both limbs observed in R.A. and N.P.D.

Right Ascensions and North Polar Distances of the Centre of Mercury.

Oxford Mean Solar Time of Transit of Centre.	Observer.	R.A. from Observation.	Seconds of Tabular R.A.	Apparent Error of Tabular R.A.	N.P.D. from Observation.	Seconds of Tabular N.P.D.	Apparent Error of Tabular N.P.D.
1864. d. h. m. s.		h. m. s.	s.	s.	° ′ ″	″	″
Jan. 4 1 23 13·8	L	20 16 54·85	54·68	−0·17	111 18 43·16	42·87	−0·29
5 1 24 45·3	Q	20 22 23·20	23·19	−0·01	110 52 26·70	22·08	−4·62
Mar. 15 23 12 9·7	Q	22 49 21·15	20·84	−0·31	99 56 25·03	24·76	−0·27
17 23 17 0·9	Q	23 2 6·27	6·11	−0·16	98 37 36·07	35·77	−0·30
23 23 32 45·6	Q	23 41 32·84	32·39	−0·45	94 12 35·23	37·60	+2·37
Apr. 12 0 36 32·7	Q	2 0 24·90	24·89	−0·01	77 7 24·63	28·40	+3·77
14 0 43 48·9	Q	2 15 35·42	35·57	+0·15	75 24 37·30	37·12	−0·18
19 1 0 19·6	Q	2 51 51·64	51·73	+0·09	71 39 59·72	59·53	−0·19
20 1 3 10·8	Q	2 58 39·88	39·99	+0·11	71 1 52·43	49·33	−3·10
21 1 5 50·6	Q	3 5 16·59	16·63	+0·04	70 26 9·13	7·76	−1·37
22 1 8 17·8	L	3 11 40·68	40·63	−0·05	69 52 58·26	57·59	−0·67
23 1 10 31·3	Q	3 17 51·16	51·07	−0·09	69 22 22·12	20·83	−1·29
25 1 14 14·1	Q	3 29 27·74	27·75	+0·01	68 28 50·06	49·11	−0·95
June 19 22 26 42·0	Q	4 22 15·22	14·98	−0·24	71 34	......	......
July 4 23 5 3·7	Q	5 59 51·63	51·45	−0·18	66 44 10·66	8·98	−1·68
6 23 14 26·4	Q	6 17 8·99	9·27	+0·28	66 24 36·65	35·53	−1·12
27 0 52 12·8	Q	9 14 2·55	1·77	−0·78	72 9	......	......
29 0 59 12·5	Q	9 28 56·48	56·57	+0·09	73 24 40·98	40·16	−0·82
Aug. 6 1 20 54·3	Q	10 22 14·26	14·31	+0·05	78 49 35·73	30·12	−5·61
8 1 24 53·6	Q	10 34 7·42	7·35	−0·07	80 13 37·62	36·05	−1·57
11 1 29 54·6	Q	10 50 58·88	58·88	0·00	82 19 45·22	43·20	−2·02

Right Ascensions and North Polar Distances of the Centre of Mercury, (concluded.)

Oxford Mean Solar Time of Transit of Centre.	Observer.	R.A. from Observation.	Seconds of Tabular R.A.	Apparent Error of Tabular R.A.	N.P.D. from Observation.	Seconds of Tabular N.P.D.	Apparent Error of Tabular N.P.D.
1864. d. h. m. s.		h. m. s.	s.	s.	° ′ ″	″	″
Aug. 12 1 31 20·0	Q	10 56 21·02	21·25	+0·23	83 1 32·83	31·66	−1·17
30 1 36 6·9	Q	12 12 6·68	6·84	+0·16	94 8 0·97	1·80	+0·83
Oct. 5 22 45 55·3	Q	11 47 19·60	19·72	+0·12	87 29 21·14	21·43	+0·29
6 22 44 37·4	Q	11 49 58·03	57·90	−0·13	87 33 30·82	29·25	−1·57
14 22 48 15·6	Q	12 25 9·24	9·21	−0·03	90 31 46·96	44·42	−2·54
Nov. 1 23 25 55·9	L	14 13 53·70	53·97	+0·27	102 35 33·44	32·28	−1·16
2 23 28 13·0	L	14 20 7·65	7·63	−0·02	103 14 12·61	13·36	+0·75

Right Ascensions and North Polar Distances of the Centre of Venus.

Oxford Mean Solar Time of Transit of Centre.	Observer.	R.A. from Observation.	Seconds of Tabular R.A.	Apparent Error of Tabular R.A.	N.P.D. from Observation.	Seconds of Tabular N.P.D.	Apparent Error of Tabular N.P.D.
1864. d. h. m. s.		h. m. s.	s.	s.	° ′ ″	″	″
Jan. 3 20 53 43·5	L	15 46 40·30	39·71	−0·59	107 3 37·98	40·08	+2·10
25 21 13 59·2	L	17 33 43·42	42·90	−0·52	111 18 40·75	47·20	+6·45
27 21 16 15·3	L	17 43 53·22	52·59	−0·63	111 29 58·50	61·37	+2·87
Feb. 3 21 24 32·4	L	18 19 47·54	46·96	−0·58	111 50 47·28	48·28	+1·00
8 21 30 39·9	Q	18 45 38·31	37·50	−0·81	111 47 18·90	19·92	+1·02
9 21 31 52·7	L	18 50 48·31	48·01	−0·30	111 44 45·81	46·20	+0·39
16 21 40 26·5	L	19 26 59·45	58·81	−0·64	111 9 18·71	22·57	+3·86
Mar. 11 22 6 27·6	Q	21 27 42·08	41·63	−0·45	105 31 26·57	26·46	−0·11
15 22 10 0·1	Q	21 47 1·35	1·09	−0·26	104 7 19·87	18·01	−1·86
17 22 11 40·6	Q	21 56 35·28	35·23	−0·05	103 22 50·68	49·15	−1·53
23 22 16 21·9	Q	22 24 56·59	56·36	−0·23	101 0 49·18	48·83	−0·35
31 22 21 53·0	Q	23 2 1·02	0·89	−0·13	97 34 50·24	47·68	−2·56
Apr. 11 22 28 29·2	Q	23 52 0·42	0·67	+0·25	92 30 27·64	23·94	−3·70
12 22 29 3·1	Q	23 56 30·92	31·20	+0·28	92 1 60·49	58·52	−1·97
13 22 29 36·9	Q	0 1 1·42	1·51	+0·09	91 33 32·62	28·61	−4·01
14 22 30 10·7	Q	0 5 31·88	31·66	−0·22	91 4 57·78	54·79	−2·99
17 22 31 50·2	L	0 19 1·23	1·42	+0·19	89 38 57·11	56·97	−0·14
18 22 32 23·3	Q	0 23 30·98	31·24	+0·26	89 10 13·52	14·57	+1·05
19 22 32 56·5	Q	0 28 0·83	1·09	+0·26	88 41 38·16	31·57	−6·59
20 22 33 29·8	Q	0 32 30·77	31·01	+0·24	88 12 55·72	48·67	−7·05
21 22 34 3·2	Q	0 37 0·87	1·03	+0·16	87 44 15·92	6·67	−9·25

Feb. 8 and April 12. The N.L. only observed in N.P.D. For corrections applied to the tabular semi-diameter, see the Introduction.

Right Ascensions and North Polar Distances of the Centre of Venus,

(continued.)

Oxford Mean Solar Time of Transit of Centre.	Observer.	R.A. from Observation.	Seconds of Tabular R.A.	Apparent Error of Tabular R.A.	N.P.D. from Observation.	Seconds of Tabular N.P.D.	Apparent Error of Tabular N.P.D.
1864. d. h. m. s.		h. m. s.	s.	s.	° ′ ″	″	″
Apr. 22 22 34 36·6	Q	0 41 30·94	31·20	+0·26	87 15 33·52	26·18	−7·34
24 22 35 44·2	Q	0 50 31·84	32·12	+0·28	86 18 17·90	12·31	−5·59
28 22 38 3·2	Q	1 8 37·41	37·48	+0·07	84 24 36·27	32·87	−3·40
May 13 22 47 59·7	Q	2 17 43·85	44·28	+0·43	77 39 40·62	35·09	−5·53
19 22 52 48·5	Q	2 46 12·81	13·28	+0·47	75 13 18·26	14·08	−4·18
23 22 56 21·6	Q	3 5 32·64	32·99	+0·35	73 42 39·52	37·10	−2·42
26 22 59 12·9	Q	3 20 14·13	14·30	+0·17	72 38 53·42	50·57	−2·85
27 23 0 11·8	Q	3 25 9·77	10·31	+0·54	72 18 26·70	26·76	+0·06
June 3 23 7 38·7	Q	4 0 13·74	14·28	+0·54	70 8 57·15	56·39	−0·76
5 23 9 56·5	Q	4 10 25·04	25·43	+0·39	69 36 33·78	32·31	−1·47
9 23 14 44·2	Q	4 30 59·75	60·28	+0·53	68 38 29·41	25·90	−3·51
17 23 25 4·2	Q	5 12 53·95	54·39	+0·44	67 11 9·19	6·83	−2·36
19 23 27 46·8	Q	5 23 30·11	30·62	+0·51	66 55 44·42	41·22	−3·20
July 4 23 48 55·0	Q	6 43 50·12	50·72	+0·60	66 27 21·94	19·31	−2·63
6 23 51 44·6	Q	6 54 33·28	33·79	+0·51	66 35 25·01	25·20	+0·19
Aug. 3 0 25 14·8	Q	9 14 35·95	36·13	(+0·18)	72 38 49·77	47·86	−1·91
4 0 26 15·5	Q	9 19 33·46	33·17	−0·29	73 0 14·98	13·56	−1·42
5 0 27 14·8	Q	9 24 29·40	29·07	−0·33	73 22 6·97	7·45	+0·48
6 0 28 12·7	Q	9 29 23·99	23·84	−0·15	73 44 28·79	28·95	+0·16
8 0 30 5·7	Q	9 39 10·46	9·97	−0·49	74 30 30·90	31·53	+0·63
11 0 32 46·3	Q	9 53 41·13	40·87	−0·26	75 42 45·64	43·98	−1·66
12 0 33 37·5	Q	9 58 29·11	29·01	−0·10	76 7 35·70	35·56	−0·14
13 0 34 28·1	Q	10 3 16·33	16·10	−0·23	76 32 49·80	49·63	−0·17
15 0 36 5·9	Q	10 12 47·54	47·21	−0·33	77 24 23·03	22·19	−0·84
18 0 38 25·1	Q	10 26 56·75	56·52	−0·23	78 44 10·94	11·69	+0·75
26 0 43 59·4	Q	11 4 4·36	4·25	−0·11	82 29 33·09	30·32	−2·77
27 0 44 38·2	Q	11 8 39·83	39·52	−0·31	82 58 45·18	43·46	−1·72
29 0 45 53·3	Q	11 17 48·32	48·33	+0·01	83 57 46·42	43·63	−2·79
30 0 46 30·5	Q	11 22 22·12	21·94	−0·18	84 27 34·05	29·27	−4·78
Sept. 15 0 55 43·1	Q	12 34 41·13	40·66	−0·47	92 36 41·81	38·56	−3·25
26 1 2 19·3	Q	13 24 40·25	39·73	−0·52	98 10 21·35	17·33	−4·02
27 1 2 58·4	Q	13 29 16·16	15·46	−0·70	98 39 53·00	49·78	−3·22
28 1 3 38·1	Q	13 33 52·60	51·88	−0·72	99 9 14·86	11·04	−3·82
29 1 4 18·7	Q	13 38 29·78	29·05	−0·73	99 38 22·82	20·30	−2·52
Oct. 3 1 7 8·4	Q	13 57 6·25	5·67	−0·58	101 32 45·37	42·41	−2·96
5 1 8 38·5	Q	14 6 29·70	29·23	−0·47	102 28 24·63	21·49	−3·14

On April 24, May 26, June 3 and 5, and Aug. 29. The N.L. only was observed; on July 6 and Aug. 3, the S.L. only; and on Aug. 8, the N. cusp was observed. For corrections applied to the tabular semi-diameter, see the Introduction.

June 17. No clock-error observed on this day. Aug. 3. Observed at the last wire only; fluttering.

Right Ascensions and North Polar Distances of the Centre of Venus,
(concluded.)

Oxford Mean Solar Time of Transit of Centre.	Observer.	R.A. from Observation.	Seconds of Tabular R.A.	Apparent Error of Tabular R.A.	N.P.D. from Observation.	Seconds of Tabular N.P.D.	Apparent Error of Tabular N.P.D.
1864. d. h. m. s.		h. m. s.	s.	s.	° ′ ″	″	″
Oct. 6 1 9 25·0	Q	14 11 12·86	12·44	—0·42	102 55 47·62	45·23	—2·39
7 1 10 12·7	Q	14 15 57·26	56·64	—0·62	103 22 54·13	50·66	—3·47
8 1 11 1·2	Q	14 20 42·37	41·85	—0·52	103 49 40·84	37·19	—3·65
31 1 34 57·3	L	16 15 23·11	22·48	—0·63	112 7 56·54	53·36	—3·18
Nov. 4 1 40 11·0	L	16 36 23·95	22·97	—0·98	113 5 14·64	12·14	—2·50
10 1 48 28·5	Q	17 8 22·16	21·50	—0·66	114 11 13·84	11·38	—2·46
25 2 10 28·5	Q	18 29 34·05	33·87	—0·18	115 2 9·12	7·34	—1·78
29 2 16 18·8	Q	18 51 11·57	11·25	—0·32	114 47 13·20	12·50	—0·70
Dec. 1 2 19 10·9	L	19 1 57·26	56·72	—0·54	114 35 18·64	17·39	—1·25

Right Ascensions and North Polar Distances of the Centre of Mars.

Oxford Mean Solar Time of Transit of Centre.	Observer.	R.A. from Observation.	Seconds of Tabular R.A.	Apparent Error of Tabular R.A.	N.P.D. from Observation.	Seconds of Tabular N.P.D.	Apparent Error of Tabular N.P.D.
1864. d. h. m. s.		h. m. s.	s.	s.	° ′ ″	″	″
Nov. 28 12 0 47·8	Q	4 33 20·02	17·50	—2·52	66 14 67·16	45·47	—21·69
29 11 55 11·1	Q	4 31 38·91	36·51	—2·40	66 15 60·08	38·00	—22·08
30 11 49 34·7	Q	4 29 58·21	55·69	—2·52	66 16 59·90	37·52	—22·38
Dec. 1 11 43 59·0	L	....	......	......	66 17 64·10	43·70	—20·40
8 11 5 22·7	Q	4 17 11·36	9·00	—2·36	66 27 69·69	49·84	—19·85
12 10 44 1·9	Q	4 11 33·36	31·31	—2·05	66 34 61·36	40·87	—20·49

Right Ascensions and North Polar Distances of the Centre of Jupiter.

Oxford Mean Solar Time of Transit of Centre.	Observer.	R.A. from Observation.	Seconds of Tabular R.A.	Apparent Error of Tabular R.A.	N.P.D. from Observation.	Seconds of Tabular N.P.D.	Apparent Error of Tabular N.P.D.
1864. d. h. m. s.		h. m. s.	s.	s.	° ′ ″	″	″
Jan. 3 20 22 27·1	L	15 15 18·76	17·65	−1·11	107 3 38·17	33·31	(−4·86)
May 7 12 20 55·0	Q	15 25 16·77	15·26	−1·51	107 29 60·28	57·22	−3·06
13 11 54 14·7	L	15 22 11·45	9·89	−1·56	107 18 58·37	57·22	−1·15
18 11 32 1·4	Q	15 19 37·22	35·74	−1·48	107 9 48·24	46·82	−1·42
20 11 23 8·8	Q	15 18 36·33	34·79	−1·54	107 6 10·33	8·92	−1·41
24 11 5 25·8	Q	15 17 36·62	34·99	−1·63	106 59 2·52	0·63	−1·89
26 10 56 35·7	Q	15 15 38·15	36·43	−1·72	106 55 30·61	31·43	+0·82
27 10 52 10·6	Q	15 15 8·93	7·56	−1·37	106 53 49·99	48·44	−1·55
30 10 38 58·6	Q	15 13 44·46	42·77	−1·69	106 48 49·36	46·25	−3·11
June 3 10 21 27·2	Q	15 11 56·34	54·73	−1·61	106 42 24·40	22·77	−1·63
6 10 8 22·9	Q	15 10 39·57	38·05	−1·52	106 37 54·35	52·09	−2·26
7 10 4 2·3	Q	15 10 14·84	13·42	−1·42	106 36 26·73	25·50	−1·23
8 9 59 42·4	Q	15 9 50·81	49·29	−1·52	106 35 0·98	0·90	−0·08
10 9 51 4·0	Q	15 9 4·07	2·53	−1·54	106 32 18·10	17·92	−0·18
11 9 46 45·4	Q	15 8 41·30	39·93	−1·37	106 30 60·12	59·53	−0·59
13 9 38 10·3	Q	15 7 57·95	56·37	−1·58	106 28 30·95	29·45	−1·50
15 9 29 37·2	Q	15 7 16·55	15·08	−1·47	106 26 9·62	8·47	−1·15
16 9 25 21·4	Q	15 6 56·62	55·30	−1·32	106 25 1·80	1·58	−0·22
21 9 4 12·7	Q	15 5 27·23	25·51	−1·72	106 20 6·12	4·60	−1·52
23 8 55 49·4	Q	15 4 55·62	54·00	−1·62	106 18 25·41	24·14	−1·27
27 8 39 10·6	Q	15 3 60·37	58·83	−1·54	106 15 38·48	36·17	−2·31
30 8 26 48·7	Q	15 3 26·05	24·58	−1·47	106 13 61·32	59·91	−1·41
July 5 8 6 25·9	Q	15 2 42·75	41·51	−1·24	106 12 20·19	18·44	−1·75

Jan. 3. The diameter observed in N.P.D. is very discordant, and the resulting N.P.D. is therefore subject to great suspicion.

June 16. The 1st L. only observed, and only over two wires; the S.L. also was alone observed, and the correction + 1″·68 is applied to the tabular semi-diameter.

Right Ascensions and North Polar Distances of the Centre of Saturn.

Oxford Mean Solar Time of Transit of Centre.	Observer.	R.A. from Observation.	Seconds of Tabular R.A.	Apparent Error of Tabular R.A.	N.P.D. from Observation.	Seconds of Tabular N.P.D.	Apparent Error of Tabular N.P.D.
1864. d. h. m. s.		h. m. s.	s.	s.	° ′ ″	″	″
Jan. 1 18 23 38·7	L	13 8 17·69	18·41	+0·72	94 37 47·12	65·02	+17·90
Mar. 29 12 29 23·7	Q	13 0 1·34	2·09	+0·75	93 25 45·81	62·82	+17·01
30 12 25 10·9	L	12 59 44·45	45·16	+0·71	93 23 56·34	74·12	+17·78
Apr. 1 12 16 45·6	L	12 59 10·76	11·14	+0·38	93 20 19·26	36·62	+17·36
13 11 26 11·0	L	12 55 46·55	47·10	+0·55	92 59 4·59	21·25	+16·66
14 11 21 58·4	Q	12 55 29·77	30·42	+0·65	92 57 22·81	39·05	+16·24
18 11 5 9·4	L	12 54 24·19	24·67	+0·48	92 50 43·36	59·97	+16·61
19 11 0 57·1	Q	12 54 7·79	8·52	+0·73	92 49 7·47	22·87	+15·40
20 10 56 45·4	L	12 53 51·97	52·50	+0·53	92 47 29·58	46·87	+17·29
21 10 52 33·3	Q	12 53 35·70	36·62	+0·92	92 45 55·52	71·97	+16·45
23 10 44 10·5	Q	12 53 4·67	5·32	+0·65	92 42 49·39	66·17	+16·78
25 10 35 48·2	L	12 52 34·10	34·65	+0·55	92 39 48·80	65·58	+16·78
29 10 19 5·4	L	12 51 34·73	35·49	+0·76	92 34 3·90	21·91	+18·01
May 5 9 54 8·3	Q	12 50 12·84	13·06	+0·22	92 26 19·85	34·85	+15·00
7 9 45 50·7	Q	12 49 46·99	47·51	+0·52	92 23 57·97	73·36	+15·39
13 9 21 5·1	L	12 48 36·70	37·27	+0·57	92 17 38·88	55·69	+16·81
14 9 16 58·6	Q	12 48 26·11	26·56	+0·45	92 16 45·53	59·90	+14·37
18 9 0 35·2	Q	12 47 46·17	46·75	+0·58	92 13 24·47	37·94	+13·47
24 8 36 9·5	Q	12 46 55·80	56·49	+0·69	92 9 27·30	40·28	+12·98
27 8 24 1·2	Q	12 46 35·15	35·81	+0·66	92 7 58·78	72·00	+13·22

MEASURES OF DISTANCE

AND

ANGLE OF POSITION

OF THE

COMPONENTS OF DOUBLE STARS,

AND OF THE

DIAMETERS OF THE PLANETS

VENUS AND MARS;

MADE IN THE YEAR

1864.

No. for Ref.	Day, 1864.	Sidereal Time.	Object.	Concluded Scale Readings.	Distances from Zero in Scale Divisions.	Mean of Measures in Arc.	Readings of Position-Circle.	Angle of Position.
		h. m.		div.	div.	"	° ′	° ′
1	Feb. 3	18 7	Venus.	140·528	0·468		20 12	
2	21^h M.T.	11		·513	·453			
3		14		·559	·499			
4		17		·555	·495			
5		19		·530	·470	14·04		0 5
6		22		139·582	·478		23 5	
7		25		·585	·475			
8		27		·560	·500			
9		29		·601	·459			
10	Feb. 16	4 37	Σ 291.	140·247	0·216		309 55	
11		39		·266	·235			
12		41		·260	·229			
13		48		139·802	·229	3·34	318 35	112 42
14		50		·795	·236			
15		52		·817	·214			
16	Mar. 24	7 40	Σ 425.	140·287	0·180		294 39	
17		42		·282	·175			
18		45		·285	·178			
19		47		139·932	·175	2·62	315 50	103 42
20		49		·925	·182			
21		51		·929	·178			
22		8 5	Σ 848. (A, B.)	140·284	0·184		300 59	
23		7		·297	·197			
24		9		·312	·212			
25		14		139·903	·197	2·91	308 21	103 7
26		16		·909	·191			
27		18		·895	·205			
28		9 17	Castor.	140·501	0·383		259 34	
29		19		·494	·376			
30		21		·496	·378			
31		26		139·738	·380	5·58	261 57	239 13
32		28		·738	·380			
33		30		·743	·375			

Assumed value of one division of the scale, 29″·424.
Assumed zero of position-circle, 21° 33′.

1, &c. Not very distinct.
10, &c. Stars equal; mag. 7½; white. Cloudy after this time.
16, &c. Stars equal; mag. 8; white.

22, &c. Mags. 7 and 8; white. Apparent change of distance and position.
28, &c. Mags. 3 and 3½; white.

No. for Ref.	Day, 1864.	Sidereal Time.	Object.	Concluded Scale Readings.	Distances from Zero in Scale Divisions.	Mean of Measures in Arc.	Readings of Position-Circle.	Angle of Position.
		h. m.		div.	div.	″	° ′	° ′
1	Mar. 24	9 45	2 Comæ.	139·851	0·274		262 10	
2		47		·863	·262			
3		49		·868	·257	3·88		235 32
4		55		140·380	·255		252 0	
5		57		·404	·279			
6		10 0		·381	·256			
7	Mar. 29	11 29	e Virginis.	139·885	0·245		74 40	
8		31		·900	·230			
9		33		·890	·240	3·52		228 58
10		39		140·380	·250		66 22	
11		41		·368	·238			
12		43		·359	·229			
13	Mar. 30	8 19	Σ 369.	140·394	0·261		48 35	
14		21		·359	·226			
15		23		·385	·252	3·63		25 51
16		26		139·885	·248		46 13	
17		28		·884	·249			
18		30		·888	·245			
19		9 46	Σ 813.	139·796	0·221		342 49	
20		48		·810	·235			
21		50		·801	·226	3·34		140 53
22		55		·358	·217		342 3	
23		57		·355	·220			
24		59		·331	·244			
25		10 13	Σ 899.	139·710	0·130		33 45	
26		15		·727	·14[illegible]			
27		17		·761	·181	2·25		12 12
28		20		·419	·161		33 45	
29		22		·410	·170			
30		25		·452	·128			

Assumed value of one division of the scale, 29″·424.
Assumed zero of position-circle, 21° 33′.

1, &c. Mags. 6·5 and 7·5.

7, &c. Mags. 5·7 and 8; white and bluish. Very difficult measures.

13, &c. Mags. 6·5 and 7·3; both white. A small change.

19, &c. Stars equal; mag. 8·2; brilliant white. Before this observation I attempted to adjust the zero, but I found that the rod which turns the screw of the other segment would not act. The zero is, however, changed. Change of angle?

25, &c. Mags. 7·2 and 7·6; splendid white. Measures very difficult. Change of angle?

Nos. for Ref.	Day, 1864.	Sidereal Time.	Object.	Concluded Scale Readings.	Distances from Zero in Scale Divisions.	Mean of Measures in Arc.	Readings of Position-Circle.	Angle of Position.
		h. m.		div.	div.	"	° ′	° ′
1	Mar. 30	10 46	Σ 981.	139·819	0·246		341 54	
2		48		·809	·236			
3		50		·802	·229			
4		56		·346	·227	3·49	341 54	140 21
5		58		·333	·240			
6		60		·329	·244			
7		11 10	Σ 1177.	139·302	0·257		7 0	
8		12		·319	·240			
9		14		·318	·241			
10		17		·815	·256	3·62	12 29	348 12
11		19		·801	·242			
12		21		·801	·242			
13	Apr. 2	8 15	Σ 1029.	140·129	0·142		219 39	
14		17		·149	·162			
15		19		·160	·173			
16		22		139·808	·179	2·34	215 9	15 51
17		24		·828	·159			
18		26		·847	·140			
19		8 42	Σ 391.	140·230	0·242		123 7	
20		44		·252	·264			
21		46		·258	·270			
22		54		139·740	·248	3·81	110 5	95 3
23		56		·708	·280			
24		58		·740	·248			
25		9 57	Σ 1355.	139·825	0·176		154 36	
26		59		·820	·181			
27		10 1		·811	·190			
28		10		140·188	·187	2·69	159 53	315 42
29		12		·199	·198			
30		14		·164	·163			

Assumed value of one division of the scale, 29″·424.
Assumed zero of position-circle, 21° 33′.

1, &c. Stars equal; mag. 7·8; white.

7, &c. Mags. 6·5 and 7·2; bright white and dull white. A pretty star. Easy measures and good. A beautiful night.

13, &c. Mags. 7·5 and 8·0; white. Before the observations I adjusted the zero of the scale to 140^{div}. Images very confused, and measures difficult.

19, &c. Mags. 7·0 and 7·4; brilliant white.

25, &c. Stars equal; mag. 7·6; white. Very difficult measures; images very confused and unsteady. Rain-cloud forming.

Nos. for Ref.	Day, 1864.	Sidereal Time.	Object.	Concluded Scale Readings.	Distances from Zero in Scale Divisions.	Mean of Measures in Arc.	Readings of Position-Circle.	Angle of Position.
		h. m.		div.	div.	″	° ′	° ′
1	Apr. 12	8 32	Σ 648.	140·280	0·305		93 22	
2		36		·304	·329			
3		38		·271	·296	4·56		72 54
4		40		139·683	·292		95 33	
5		42		·660	·315			
6		44		·650	·325			
7		9 7	Σ 1027.	139·555	0·447		198 31	
8		9		·535	·467			
9		11		·565	·437	6·62		356 46
10		27		140·438	·436		198 7	
11		29		·452	·450			
12		31		·468	·466			
13		11 0	Σ 1276.	140·862	0·868		194 51	
14		2		·838	·844			
15		4		·821	·827	12·46		353 40
16		17		139·143	·851		195 35	
17		19		·140	·854			
18		21		·159	·835			
19		11 52	Σ 1360.	139·033	0·965		266 18	
20		54		·030	·968			
21		56		·027	·971	14·24		242 25
22		12 0		140·973	·975		261 37	
23		2		·958	·960			
24		4		·967	·969			
25		12 17	Σ 1442.	140·890	0·909		175 23	
26		19		·899	·918			
27		21		·879	·898	13·36		154 34
28		25		139·079	·902		176 51	
29		28		·070	·911			
30		30		·069	·912			
31	Apr. 13	9 20	Σ 877.	139·620	0·369		105 20	
32		22		·593	·396			
33		24		·608	·381	5·62		263 51
34		27		140·373	·384		105 27	
35		30		·360	·371			
36		33		·381	·392			

Assumed value of one division of the scale, 29″·424.
Assumed zero of position-circle, 21° 33′.

1, &c. Mags. 7·0 and 7·8; white. Very unsteady.
7, &c. Stars equal; mag. 7·8; white.
13, &c. Mags. 7·5 and 7·7; white.
19, &c. Stars equal; mag. 8; white.
25, &c. Mags. 7·0 and 7·2; brilliant white.
31, &c. Mags. 7·0 and 7·2; white.

Nos. for Ref.	Day. 1864.	Sidereal Time.	Object.	Concluded Scale Readings.	Distances from Zero in Scale Divisions.	Mean of Measures in Arc.	Readings of Position-Circle.	Angle of Position.
		h. m.		div.	div.	″	° ′	° ′
1	Apr. 13	9 40	Σ 880.	140·358	0·362		77 33	
2		42		·381	·385			
3		44		·351	·355			
4		50		139·616	·380	5·40	75 41	55 4
5		52		·630	·366			
6		54		·640	·356			
7		10 50	Σ 1255.	139·522	0·471		50 33	
8		52		·520	·473			
9		54		·539	·454			
10		11 1		140·463	·470	27·42	52 45	30 6
11		3		·461	·468			
12		5		·453	·460			
13		11 34	Σ 1760.	140·598	0·599		83 48	
14		37		·600	·601			
15		40		·597	·598			
16		44		139·395	·604	8·81	85 33	63 8
17		47		·396	·603			
18		49		·409	·590			
19		12 2	Σ 1838.	139·416	0·589		355 17	
20		4		·400	·605			
21		6		·395	·610			
22		10		140·607	·602	8·84	358 17	335 14
23		12		·610	·605			
24		14		·602	·597			
25	21ʰ M.T.	22 48	Venus.	140·342	0·346		184 49	
26		50		·351	·355			
27		52		·355	·359			
28		54		·323	·327			
29		56		·337	·341			
30		59		139·646	·350	10·12	180 52	161 18
31		23 3		·665	·331			
32		5		·650	·346			
33		7		·649	·347			
34		8		·656	·340			

Assumed value of one division of the scale, 29″·424.
Assumed zero of position-circle, 21° 33′.

1, &c. Stars equal; mag. 8; white.
7, &c. Mags. 6·5 and 7·0; brilliant white and duller white. Method of half-distance.
13, &c. Stars equal; mag. 8; white.

19, &c. Stars equal; mag. 7; brilliant white. Struve suspected that the angle was diminishing. It is plainly constant.
25, &c. Indistinct and unsteady.

No. for Ref.	Day, 1864.	Sidereal Time.	Object.	Concluded Scale Readings.	Distances from Zero in Scale Divisions.	Mean of Measures in Arc.	Readings of Position-Circle.	Angle of Position.
		h. m.		div.	div.	″	° ′	° ′
1	Apr. 14	9 25	Σ 1600.	139·499	0·514		113 53	
2		27		·477	·536			
3		30		·482	·531	7·75		93 40
4		33		140·548	·535		116 33	
5		35		·547	·534			
6		37		·523	·510			
7		9 50	Σ 1521.	140·243	0·237		116 57	
8		53		·272	·266			
9		55		·253	·247	3·68		93 11
10		10 0		139·767	·239		112 30	
11		2		·748	·258			
12		5		·755	·251			
13		10 55	Σ 1858.	140·101	0·117		49 18	
14		57		·132	·148			
15		11 0		·142	·158	2·07		25 35
16		3		139·838	·146		44 57	
17		5		·857	·127			
18		7		·834	·150			
19		11 48	Σ 2273.	141·412	1·418		125 4	
20		50		·364	·370			
21		52		·391	·397	20·52		282 1
22		12 2		138·599	·395		122 3	
23		4		·602	·392			
24		6		·596	·398			
25		12 25	Σ 1659. (A, B.)	141·813	1·810		193 30	
26		27		·789	·786			
27		29		·823	·820	26·57		351 57
28		30		138·225	·778		193 30	
29		32		·187	·816			
30		34		·179	·824			

Assumed value of one division of the scale, 29″·424.
Assumed zero of position-circle, 21° 33′.

1, &c. Mags. 7 and 8; white and dusky white.

7, &c. Mags. 7·2 and 7; brilliant white.

13, &c. Stars equal; mag. 7·8; yellowish white. Confused and unsteady; measures difficult.

19, &c. Mags. 6·5 and 6·7; brilliant white and duller white.

25, &c. Mag. 7·2; stars equal; white.

Nos. for Ref.	Day, 1864.	Sidereal Time.	Object.	Concluded Scale Readings.	Distances from Zero in Scale Divisions.	Mean of Measures in Arc.	Readings of Position-Circle.	Angle of Position.
		h. m.		div.	div.	″	° ′	° ′
1	Apr. 14 21^h M.T.	22 45	Venus.	139·652	0·350		181 58	
2		47		·656	·346			
3		50		·630	·372			
4		52		·631	·371			
5		54		·663	·339	10·48		161 23
6		59		140·360	·358		183 53	
7		23 1		·366	·364			
8		3		·359	·357			
9		4		·355	·353			
10		6		·350	·348			
11	Apr. 18	9 32	Σ 1527.	140·279	0·275		33 26	
12		35		·265	·261			
13		37		·260	·256	3·88		13 42
14		40		139·733	·271		37 4	
15		42		·752	·252			
16		44		·735	·269			
17		9 57	Σ 1696.	140·271	0·272		42 3	
18		59		·249	·250			
19		10 1		·268	·269	3·88		202 28
20		6		139·746	·253		45 58	
21		8		·727	·272			
22		10		·734	·265			
23		11 12	Σ 1575.	140·556	0·547		50 9	
24		14		·546	·537			
25		16		·544	·535	31·78		210 13
26		18		139·468	·541		53 22	
27		20		·471	·538			
28		22		·467	·542			
29		12 0	Σ 1740.	140·463	0·468		93 33	
30		2		·456	·461			
31		4		·461	·466	27·36		75 23
32		7		139·539	·456		100 18	
33		9		·534	·461			
34		11		·519	·476			

Assumed value of one division of the scale, 29″·424.
Assumed zero of position-circle, 21° 33′.

1, &c. Tolerably distinct. Wind south.

11, &c. Mags. 7·2 and 8·0; yellowish, and gray or bluish.

17, &c. Stars equal; mag. 8·3; white. Hazy. Measures very difficult owing to the faintness and unsteadiness of the stars.

23, &c. Mags. 7·0 and 7·5; brilliant white. Method of half-distance. Has the distance changed?

29, &c. Stars equal; mag. 7; brilliant white. Method of half-distance.

No. for Ref.	Day, 1864.	Sidereal Time.	Object.	Concluded Scale Readings.	Distances from Zero in Scale Divisions.	Mean of Measures in Arc.	Readings of Position-Circle.	Angle of Position.
		h. m.		div.	div.	″	° ′	° ′
1	Apr. 18	12 21	π^1 Ursæ Minoris. B.A.C. 5205.	139·478	0·532		105 28	
2		23		·483	·527			
3		25		·497	·513			
4		34		140·514	·504	30·84		83 54
5		36		·552	·542		105 25	
6		38		·523	·513			
7		40		·548	·538			
8	21ʰ M.T.	22 52	Venus.	140·334	0·317		352 10	
9		54		·358	·341			
10		56		·328	·311			
11		58		·360	·343			
12		23 0		·346	·329	9·86		330 37
13		1		139·665	·352		352 10	
14		3		·689	·328			
15		5		·667	·350			
16		6		·675	·342			
17		7		·680	·337			
18	Apr. 19	9 37	Σ 1645.	139·285	0·728		0 3	
19		39		·302	·711			
20		41		·302	·711	10·55		158 30
21		44		140·721	·708		0 3	
22		46		·732	·719			
23		48		·736	·723			
24		9 55	Σ 1615.	140·456	0·444		286 52	
25		57		·472	·460			
26		59		·481	·469	26·95		87 30
27		10 7		139·560	·452		291 13	
28		9		·555	·457			
29		11		·548	·464			
30		10 58	Σ 1474. (B, C.)	139·558	0·440		219 2	
31		11 0		·554	·444			
32		2		·553	·445	6·52		198 28
33		6		140·439	·441		221 0	
34		8		·436	·438			
35		10		·447	·449			

Assumed value of one division of the scale, 29″·424.
Assumed zero of position-circle, 21° 33′.

1, &c. Mags. 6·2 and 6·8; white. Method of half-distance.
18, &c. Mags. 7·3 and 7·6; brilliant white.

24, &c. Mags. 6·5 and 8·2; yellowish and bluish. Method of half-distance.
30, &c. Stars equal; mag. 7·6; white.

Nos. for Ref.	Day, 1864.	Sidereal Time.	Object.	Concluded Scale Readings.	Distances from Zero in Scale Divisions.	Mean of Measures in Arc.	Readings of Position-Circle.	Angle of Position.
		h. m.		div.	div.	″	° ′	° ′
1	Apr. 19	11 17	Σ 1633.	140·616	0·616		265 33	
2		19		·601	·601			
3		21		·615	·615	8·99		245 1
4		25		139·383	·617		267 35	
5		27		·405	·595			
6		30		·381	·619			
7		12 7	Σ 1263.	140·500	0·512		215 37	
8		9		·478	·490			
9		12		·498	·510	29·72		16 47
10		14		139·489	·499		221 3	
11		19		·482	·506			
12		21		·478	·510			
13	Apr. 20	9 52	Σ 645.	139·163	0·810		229 33	
14		55		·133	·840			
15		57		·121	·852			
16		10 0		·159	·814	12·17		26 39
17		5		140·798	·825		226 51	
18		7		·812	·839			
19		9		·791	·818			
20		10 18	Σ 698.	140·523	0·530		183 2	
21		19		·518	·525			
22		20		·541	·548	31·49		345 28
23		24		139·449	·544		190 59	
24		25		·465	·528			
25		26		·459	·534			
26		11 15	σ^4 Cancri.	139·682	0·296		154 35	
27		17		·671	·307			
28		19		·690	·288			
29		24		140·294	·316	4·36		135 51
30		26		·258	·280		160 13	
31		28		·276	·298			
32		30		·267	·289			

Assumed value of one division of the scale, 29″·424.
Assumed zero of position-circle, 21° 33′.

1, &c. Stars equal; mag. 6·5; brilliant white.

7, &c. Mags. 7·0 and 7·2; white. Struve's formula for distance is,

$$2''\cdot749 + (t - 1832\cdot05) \times 0''\cdot691.$$

For 1864·3 the computed distance is 25″·00.

Method of half-distance.

13, &c. Mags. 6·2 and 8·0; yellow and bluish.

20, &c. Mags. 6·8 and 8·0; white. Method of half-distance.

26, &c. Mags. 6·0 and 8·0; white and blue.

Nos. for Ref.	Day, 1864.	Sidereal Time.	Object.	Concluded Scale Readings.	Distances from Zero in Scale Divisions.	Mean of Measures in Arc.	Readings of Position-Circle.	Angle of Position.
		h. m.		div.	div.	″	° ′	° ′
1	Apr. 20	23 5	Venus.	140·312	0·310		175 43	
2	21^h M.T.	6		·328	·326			
3		7		·323	·321			
4		13		·300	·298			
5		15		·308	·306			
6		24		139·711	·291	9·21	179 16	155 57
7		26		·687	·315			
8		28		·682	·320			
9		30		·702	·300			
10		32		·662	·340			
11	Apr. 22	10 4	Σ 1850.	140·879	0·855		104 47	
12		6		·875	·851			
13		8		·886	·862			
14		15		139·170	·854	25·19	104 47	263 14
15		17		·174	·850			
16		20		·161	·863			
17	22^h M.T.	23 14	Venus.	140·353	0·331			
18		16		·350	·328			
19		18		·370	·348			
20		19		·352	·330			
21		21		·364	·342			
22		25		139·693	·329	9·89	174 21	152 48
23		27		·683	·339			
24		29		·687	·335			
25		31		·689	·333			
26		32		·680	·342			
27	Apr. 23	10 29	Σ 1607.	141·110	1·082		198 9	
28		32		·103	·075	31·63		357 56
29		34		·097	·069		200 48	
30	May 7	12 0	Σ 1332.	140·390	0·383		44 50	
31		3		·392	·385			
32		6		·406	·399			
33		9		139·626	·381	5·72	37 50	19 47
34		10		·618	·389			
35		11		·609	·398			

Assumed value of one division of the scale, 29″·424.
Assumed zero of position-circle, 21° 33′.

1, &c. Rather indistinct and unsteady.
11, &c. Mags. 6·5 and 6·8; white. Method of superposition of images.
27, &c. Mags. 7·5 and 8·0; white. Method of superposition of images. The galvanic light totally failed after this.
30, &c. Mags. 7·5 and 7·7; white. Observed with power 150 on micrometer eye-piece.

Nos. for Ref.	Day, 1864.	Sidereal Time.	Object.	Concluded Scale Readings.	Distances from Zero in Scale Divisions.	Mean of Measures in Arc.	Readings of Position-Circle.	Angle of Position.
		h. m.		div.	div.	″	° ′	° ′
1	May 7	12 20	Σ 1311.	140·502	0·492		40 29	
2		22		·490	·480			
3		24		·505	·495	7·19		199 9
4		26		139·510	·500		40 55	
5		29		·539	·471			
6		31		·517	·493			
7		12 47	Σ 1283.	141·164	1·154		324 33	
8		48		·140	·130	16·54		124 58
9		55		·120	·110		328 28	
10		13 0		138·907	·103			
11	May 24	12 46	γ Virginis.	140·269	0·287		187 29	
12		48		·280	·298			
13		50		·273	·291	4·30		167 21
14		56		139·690	·292		190 19	
15		58		·691	·291			
16		13 0		·690	·292			
17	May 28	13 42	γ Virginis.	140·274	0·271		2 51	
18		44		·310	·307			
19		45		·289	·286			
20		47		·289	·286	4·24		164 4
21		48		139·713	·290		8 22	
22		50		·726	·277			
23		52		·707	·296			
24		14 52	Σ 1962.	140·771	0·792		31 30	
25		53		·782	·803			
26		55		·750	·771	11·61		188 57
27		56		139·191	·788		29 30	
28		58		·187	·792			
29		15 0		·192	·787			
30		15 10	Σ 1999.	139·250	0·733		121 23	
31		12		·246	·737			
32		13		·253	·730	10·80		101 22
33		15		140·710	·727		124 27	
34		17		·719	·736			
35		19		·721	·738			

Assumed value of one division of the scale, 29″·424.
Assumed zero of position-circle, 21° 33′.

1, &c. Mags. 6·5 and 7·0; white.
7, &c. Mags. 6·5 and 7·0; white. Galvanic light very troublesome.
11, &c. The instrument in excellent order after the easing of the friction which interfered with the motion of the polar-axis.
17, &c. Power 300.
24, &c. Mags. 6·2 and 6·5; white.
30, &c. Mags. 7·5 and 8·0; white.

Nos. for Ref.	Day, 1864.	Sidereal Time.	Object.	Concluded Scale Readings.	Distances from Zero in Scale Divisions.	Mean of Measures in Arc.	Readings of Position-Circle.	Angle of Position.
		h. m.		div.	div.	″	° ′	° ′
1	May 28	15 40	Σ 2619.	140·228	0·254		84 47	
2		42		·242	·268			
3		44		·269	·295	4·00		240 17
4		48		139·709	·265		78 53	
5		50		·688	·286			
6		52		·708	·266			
7	June 6	14 58	21 Ursæ Majoris.	140·396	0·392		153 5	
8		15 0		·392	·388			
9		4		·392	·388	5·72		309 56
10		6		139·617	·387		149 52	
11		10		·616	·388			
12		12		·613	·391			
13		15 23	Σ 1312.	139·687	0·310		162 3	
14		25		·666	·331			
15		28		·665	·332	4·78		141 44
16		31		140·305	·308		164 30	
17		33		·321	·324			
18		35		·339	·342			
19		15 47	Σ 1362.	140·333	0·343		156 23	
20		48		·337	·347			
21		50		·320	·330	5·02		133 7
22		52		139·651	·339		152 57	
23		55		·640	·350			
24		57		·656	·334			
25		16 10	57 Ursæ Majoris.	139·642	0·343		194 43	
26		12		·669	·316			
27		13		·674	·311			
28		14		·678	·307	4·72		355 36
29		20		140·291	·306		199 35	
30		22		·328	·343			
31		24		·304	·319			

Assumed value of one division of the scale, 29″·424.
Assumed zero of position-circle, 21° 33′.

1, &c. Stars equal; mag. 8·2; white. Faint and very confused; observations very difficult and uncertain.
7, &c. Mags. 7·0 and 7·8; white and bluish.
13, &c. Mags. 8·0 and 8·2; bright white.
19, &c. Stars equal; mag. 7·0; brilliant white.
25, &c. Mags. 5·0 and 8·0; white and bluish. Small star nearly lost in the blaze of the large one. Difficult measures.

Nos. for Ref.	Day, 1864.	Sidereal Time.	Object.	Concluded Scale Readings.	Distances from Zero in Scale Divisions.	Mean of Measures in Arc.	Readings of Position-Circle.	Angle of Position.
		h. m.		div.	div.	″	° ′	° ′
1	June 7	15 15	Σ 1280.	139·553	0·442		234 19	
2		17		·542	·453			
3		19		·564	·431			
4		21		140·419	·424	6·50	237 1	34 7
5		22		·466	·471			
6		24		·425	·430			
7		15 40	Σ 1553.	140·374	0·378		191 27	
8		41		·390	·394			
9		44		·350	·354			
10		46		139·630	·366	5·53	189 8	168 45
11		48		·626	·370			
12		50		·605	·391			
13		16 5	Σ 1985.	139·659	0·341		162 51	
14		8		·648	·352			
15		11		·629	·371	5·33	171 27	325 36
16		17		140·385	·385			
17	June 8	15 20	Σ 1376.	139·640	0·362		150 25	
18		22		·671	·331			
19		24		·630	·372			
20		26		140·358	·356	5·22	150 25	308 52
21		28		·380	·378			
22		29		·333	·331			
23		15 39	Σ 1350.	139·300	0·708		86 25	
24		45		·311	·697			
25		48		·292	·716			
26		52		140·685	·677	10·42		246 28
27		53		·730	·722		89 37	
28		54		·730	·722			
29		55		·719	·711			

Assumed value of one division of the scale, 29″·424.
Assumed zero of position-circle, 21° 33′.

1, &c. Stars equal; mag. 7·7; white.
7, &c. Mags. 7·0 and 7·2; yellowish white.

13, &c. Mags. 7·0 and 8·0; white. Interrupted by clouds.
17, &c. Stars equal; mag. 8·2; white.
23, &c. Mags. 7·3 and 7·5; white.

No. for Ref.	Day, 1864.	Sidereal Time.	Object.	Concluded Scale Readings.	Distances from Zero in Scale Divisions.	Mean of Measures in Arc.	Readings of Position-Circle.	Angle of Position.
		h. m.		div.	div.	″	° ′	° ′
1	June 8	16 10	Σ 1516.	140·306	0·319		96 6	
2		12		·297	·310			
3		14		·268	·281			
4		15		·280	·293	4·43		71 25
5		18		139·665	·322		89 50	
6		19		·709	·278			
7		20		·681	·306			
8	June 15	15 44	Σ 1427. (A, B.)	140·608	0·634		235 22	
9		45		·596	·622			
10		47		·607	·633	9·27		214 58
11		51		139·352	·622		237 40	
12		54		·342	·632			
13		56		·337	·637			
14		16 14	Σ 1561. (A, B.)	139·317	0·676		285 27	
15		15		·291	·702			
16		16		·278	·715	10·25		263 12
17		19		140·689	·696		284 4	
18		20		·696	·703			
19		22		·685	·692			
20		16 30	Σ 1561. (A, C.)	142·799	2·800		290 11	
21		33		·813	·814			
22		35		·773	·774	82·27		268 38
23		38		137·198	·801		290 11	
24		40		·211	·788			
25		42		·199	·800			
26		16 55	Σ 1573.	140·747	0·763		19 19	
27		57		·744	·760			
28		59		·769	·785	11·33		177 15
29		17 2		139·212	·772		18 18	
30		4		·220	·764			
31		6		·210	·774			

Assumed value of one division of the scale, 29″·424.
Assumed zero of position-circle, 21° 33′.

1, &c. Mags. 7·1 and 7·2; white. Variable.
8, &c. Mags. 7·2 and 7·5; white. Power 200.
14, &c. Mags. 6·3 and 7·5; bright white and bluish. A very pretty triple star.
20, &c. C of the 7·5 mag.; white. By superposition of images. Not in Struve. I examined the star on June 16 and found the position the same. It is therefore not a planet.
26, &c. Mags. 6·3 and 7·0; bright white and bluish.

Nos. for Ref.	Day, 1864.	Sidereal Time.	Object.	Concluded Scale Readings.	Distances from Zero in Scale Divisions.	Mean of Measures in Arc.	Readings of Position-Circle.	Angle of Position.
		h. m.		div.	div.	″	° ′	° ′
1	June 15	17 15	Σ 1608.	139·208	0·763		64 27	
2		17		·237	·734			
3		18		·228	·743	10·87		223 45
4		20		140·700	·729		66 9	
5		25		·722	·751			
6		26		·721	·750			
7	June 16	15 54	Σ 1520.	140·880	0·896		183 49	
8		55		·878	·894			
9		57		·865	·881	13·11		343 59
10		16 0		139·099	·885		187 15	
11		2		·085	·899			
12		3		·096	·888			
13		16 12	Σ 1544.	139·121	0·848		113 33	
14		13		·112	·857			
15		15		·139	·830			
16		17		·147	·822	12·34		90 49
17		19		140·799	·830		111 11	
18		21		·811	·842			
19		22		·810	·841			
20		16 35	Σ 1349.	141·264	1·292		185 18	
21		36		·261	·289			
22		37		·230	·258	18·83		165 5
23		40		138·683	·289		187 57	
24		42		·690	·282			
25		44		·705	·267			
26	June 21	15 42	Σ 1402.	140·817	0·827		298 33	
27		44		·804	·814			
28		45		·775	·785			
29		46		·765	·775			
30		50		139·199	·791	23·54	300 45	98 6
31		53		·196	·794			
32		54		·195	·795			
33		55		·172	·818			

Assumed value of one division of the scale, 29″·424.
Assumed zero of position-circle, 21° 33′.

1, &c. Stars equal; mag. 7·2; brilliant white.
7, &c. Mags. 6·0 and 7·2; brilliant white and bluish.
13, &c. Mags. 7·0 and 7·8; white.
20, &c. Mags. 6·7 and 7·7; bright white and dull white.
26, &c. Mags. 7·0 and 8·0; reddish yellow and bluish. Superposition of images. Change of distance.

Nos. for Ref.	Day, 1864.	Sidereal Time.	Object.	Concluded Scale Readings.	Distances from Zero in Scale Divisions.	Mean of Measures in Arc.	Readings of Position-Circle.	Angle of Position.
		h. m.		div.	div.	″	° ′	° ′
1	June 21	16 33	Σ 1415.	140·556	0·546		8 43	
2		34		·596	·586			
3		35		·591	·581			
4		42		139·442	·568	16·83		167 47
5		45		·462	·548		9 57	
6		50		·423	·587			
7		53		·424	·586			
8	Aug. 13	18 33	Σ 2655.	140·449	0·436		17 27	
9		35		·422	·409			
10		38		·420	·407			
11		40		·427	·414	6·14		1 2
12		44		139·586	·427		27 43	
13		46		·607	·406			
14		48		·596	·417			
15		18 59	Σ 2725.	140·345	0·326		21 25	
16		19 0		·358	·339			
17		2		·369	·350			
18		5		139·674	·345	4·99	18 22	358 21
19		7		·680	·339			
20		10		·687	·332			
21		19 39	Σ 2902.	140·452	0·414		111 46	
22		41		·445	·407			
23		52		·465	·427	6·12		88 37
24		54		139·649	·389		108 33	
25		59		·597	·441			
26		20 0		·624	·414			
27		20 10	Σ 2946.	139·698	0·337		108 0	
28		11		·695	·340			
29		13		·702	·333			
30		15		140·387	·352	4·96	100 8	262 31
31		17		·361	·326			
32		19		·368	·333			

Assumed value of one division of the scale, 29″·424.
Assumed zero of position-circle, 21° 33′.

1, &c. Mags. 6·0 and 6·3; cloudy at intervals; very troublesome. By superposition of images.
8, &c. Stars equal; mag. 7·2; bluish white.

15, &c. Mags. 6·8 and 7·5; bright white and dull white. Change of distance?
21, &c. Mags. 7·0 and 7·5; bright white and livid white.
27, &c. Mags. 7·2 and 7·4; white.

No. for Ref.	Day, 1864.	Sidereal Time.	Object.	Concluded Scale Readings.	Distances from Zero in Scale Divisions.	Mean of Measures in Arc.	Readings of Position-Circle.	Angle of Position.
		h. m.		div.	div.	"	° ′	° ′
1	Aug. 15	17 51	β Cygni.	141·200	1·163		78 10	
2		52		·170	·133			
3				·219	·182			
4				·191	·154			
5		55		·221	·184	34·25		55 50
6		59		138·859	·178		76 35	
7		18 0		·890	·147			
8		3		·873	·164			
9				·863	·174			
10				·875	·162			
11	Aug. 18	17 57	Σ 2747.	139·672	0·354		92 58	
12		18 0		·710	·316			
13		2		·715	·311	4·81		256 23
14		5		140·361	·335		102 53	
15		7		·345	·319			
16		9		·352	·326			
17		19 4	Σ 2903.	140·325	0·291		119 29	
18		6		·324	·290			
19		8		·309	·275	4·28		93 34
20		12		139·737	·297		110 45	
21		14		·731	·303			
22		16		·776	(·258)			
23		19 29	Σ 2917.	139·730	0·305		88 10	
24		30		·720	·315			
25		32		·739	·296	4·49		69 59
26		33		140·340	·305		94 53	
27		35		·338	·303			
28		36		·340	·305			
29	Aug. 20	18 5	Σ 2789.	140·446	0·413		319 18	
30		7		·450	·417			
31		8		·432	·399	6·02		115 44
32		11		139·616	·417		315 15	
33		12		·611	·422			
34		14		·645	·388			

Assumed value of one division of the scale, 29″·424.
Assumed zero of position-circle, 21° 33′.

1. &c. Mags. 3 and 7; orange and sea *green* (certainly *green*). By superposition of images.
11, &c. Stars equal; mag. 8; white.
17, &c. Mags. 7·2 and 8·0; white and blue.
23, &c. Stars equal; mag. 8·0; white.
29, &c. Stars equal; mag. 7·2; white. Cloudy after this.

Nos. for Ref.	Day, 1864.	Sidereal Time.	Object.	Concluded Scale Readings.	Distances from Zero in Scale Divisions.	Mean of Measures in Arc.	Readings of Position-Circle.	Angle of Position.
		h. m.		div.	div.	″	° ′	° ′
1	Aug. 23	19 32	Σ 2873.	140·941	0·911		277 19	
2		33		·928	·898			
3		36		·935	·905	13·30		74 7
4		40		139·138	·892		274 0	
5		41		·129	·901			
6		42		·111	·919			
7	Aug. 25	18 13	Σ 2883.	139·025	0·998		270 38	
8		15		·028	0·995			
9		17		·033	0·990	14·64		254 4
10		20		141·024	1·001		280 35	
11		22		·018	0·995			
12		25		·012	0·989			
13	Aug. 26	18 16	Σ 2691.	141·163	1·129		236 38	
14		17		·183	·149			
15		23		·200	·166	16·89		32 37
16		27		138·905	·129		231 41	
17		29		·866	·168			
18		31		·887	·147			
19		19 35	Σ 2769.	140·689	0·635		324 43	
20		37		·669	·615			
21		40		·681	·627			
22		43		·660	·606	18·24		300 24
23		45		139·434	·620		319 10	
24		46		·436	·618			
25		49		·428	·626			
26		51		·439	·615			
27		20 20	Σ 2841.	138·547	1·482		309 47	
28		22		·565	·464			
29		25		·580	·449	21·55		111 47
30		28		141·475	·446		314 53	
31		30		·493	·464			
32		32		·513	·484			

Assumed value of one division of the scale, 29″·424.
Assumed zero of position-circle, 21° 33′.

1, &c. Mags. 6·5 and 7·0; white. Cloudy after this.
7, &c. Mags. 6·5 and 8·0; white and bluish. Cloudy after this.

13, &c. Mags. 7·0 and 7·5; white.
19, &c. Mags. 6·2 and 6·7; brilliant white.
27, &c. Mags. 6·5 and 7·6; white and bluish.

Nos. for Ref.	Day, 1864.	Sidereal Time.	Object.	Concluded Scale Readings.	Distances from Zero in Scale Divisions.	Mean of Measures in Arc.	Readings of Position-Circle.	Angle of Position.
		h. m.		div.	div.	″	° ′	° ′
1	Aug. 26	20 46	Σ 2893.	141·030	1·008		13 13	
2		50		·043	1·021			
3		52		·010	0·988	29·60		348 51
4		59		139·025	0·997		7 34	
5		21 2		·011	1·011			
6		5		·011	1·011			
7	Aug. 29	18 45	Σ 2840.	141·311	1·279		216 43	
8		46		·290	·258			
9		47		·299	·267	18·66		194 15
10		50		138·763	·269		214 52	
11		52		·768	·264			
12		54		·760	·272			
13		19 50	Σ 2735. Piazzi xx. 376.	139·907	0·131		307 32	
14		52		·914	·124			
15		55		·898	·144	2·03		285 14
16		59		140·146	(·108)		306 2	
17		20 0		·186	·148			
18		2		·179	·141			
19		20 14	Σ 2765.	139·805	0·222		289 37	
20		16		·807	·220			
21		18		·825	·202	3·16		88 4
22		20		140·228	·201		289 37	
23		22		·246	·219			
24		24		·250	·223			
25		20 45	Σ 2797.	140·270	0·229		240 20	
26		47		·270	·229			
27		49		·275	·234	3·38		214 32
28		55		139·815	·226		231 50	
29		21 5		·790	·251			
30		10		·829	·212			

Assumed value of one division of the scale, 29″·424.
Assumed zero of position-circle, 21° 33′.

1, &c. Mags. 6·0 and 7·5; brilliant white and bluish white. By superposition of images.

7, &c. Mags. 6·0 and 6·3; brilliant white and white. Struve's mags. are 6·0 and 7·0. Motion in distance.

13, &c. Mags. 6·5 and 7·6; white and bluish.

19, &c. Stars equal; mag. 7·8; white.

25, &c. Mags. 7·0 and 8·2; white. The measures very difficult; the stars very unsteady.

Nos. for Ref.	Day, 1864.	Sidereal Time.	Object.	Concluded Scale Readings.	Distances from Zero in Scale Divisions.	Mean of Measures in Arc.	Readings of Position-Circle.	Angle of Position.
		h. m.		div.	div.	″	° ′	° ′
1	Aug. 31	18 17	Σ 2767.	139·840	0·193		229 3	
2		18		·829	·204			
3		20		·860	·173	2·80		31 59
4		22		140·212	·179		238 0	
5		27		·223	·190			
6		30		·232	·199			
7		18 40	Σ 2786.	140·220	0·185		215 2	
8		42		·210	·175			
9		44		·227	·192	2·75		188 17
10		49		139·845	·190		204 38	
11		50		·820	·215			
12		52		·870	·165			
13		19 0	Σ 2802.	139·740	0·285		211 26	
14		2		·769	·256			
15		3		·751	·274	3·97		12 23
16		6		140·300	·275		216 25	
17		8		·277	·252			
18		10		·300	·275			
19		19 20	Σ 2804.	140·213	0·186		178 22	
20		22		·221	·194			
21		24		·228	·201	2·85		327 0
22		27		139·837	·190		158 43	
23		28		·833	·194			
24		30		·830	·197			
25		19 40	Σ 2701.	140·132	0·108		62 47	
26		42		·133	·109			
27		43		·128	·104	1·57		214 46
28		49		139·915	·109		49 51	
29		52		·920	·104			
30		54		·919	·105			
31	Sept. 9	18 58	Σ 2947.	139·796	0·226		267 21	
32		19 3		·788	·234			
33		4		·813	·209	3·25		72 51
34		6		140·239	·217		281 26	
35		8		·239	·217			

Assumed value of one division of the scale, 29″·424.
Assumed zero of position-circle, 21° 33′.

1, &c. Mags. 7·5 and 8·0; white.
7, &c. Mags. 7·0 and 7·5; brilliant white.
13, &c. Stars equal; mag. 8·0; white.
19, &c. Mags. 6·7 and 7·0; brilliant white. Motion in position?

25, &c. Mags. 7·7 and 8·0; white. Measures very difficult.
31, &c. Stars equal; mag. 7·2; white.

Nos. for Ref.	Day, 1864.	Sidereal Time.	Object.	Concluded Scale Readings.	Distances from Zero in Scale Divisions.	Mean of Measures in Arc.	Readings of Position-Circle.	Angle of Position.
		h. m.		div.	div.	″	° ′	° ′
1	Sept. 19	21 10	Σ 2862.	139·890	0·133		100 0	
2				·877	·146			
3				·853	·170			
4				140·171	·148	2·21	112 51	84 53
5				·166	·143			
6				·183	·160			
7		22 12	Σ 3061.	140·531	0·503		168 33	
8		14		·530	·502			
9		16		·540	·512			
10		18		139·521	·507	7·44	165 20	145 24
11		20		·520	·508			
12		22		·524	·504			
13		22 42	Σ 2988.	139·766	0·247		113 13	
14		44		·770	·243			
15		46		·753	·260			
16		49		140·257	·244	3·68	122 25	276 16
17		51		·269	·256			
18		53		·262	·249			
19		23 8	Σ 155.	140·342	0·309		175 42	
20		10		·345	·312			
21		12		·340	·307			
22		15		139·710	·323	4·55	165 47	329 12
23		17		·734	·299			
24		19		·728	·305			
25	Sept. 26	19 51	Σ 3017.	140·160	0·128		229 11	
26		54		·198	·166			
27		58		·192	·160			
28		20 4		139·898	·134	2·22	229 9	27 37
29		5		·891	·141			
30		6		·858	·174			
31		20 22	Σ 2545.	139·789	0·243		150 0	
32		24		·790	·242			
33		25		·770	·262			
34		28		140·289	·257	3·68	161 20	314 7
35		29		·265	·233			
36		30		·292	·260			

Assumed value of one division of the scale, 29″·424.
Assumed zero of position-circle, 21° 33′.

1, &c. Mags. 7·8 and 8·0; white. Very unsteady and indistinct.
7, &c. Stars equal; mag. 8·0; white.
13, &c. Stars equal; mag. 7·6; white.
19, &c. Stars equal; mag. 7·8; white.
25, &c. Mags. 7·5 and 8·0; white.
31, &c. Mags. 7·2 and 8·4; white.

Nos. for Ref.	Day, 1864.	Sidereal Time.	Object.	Concluded Scale Readings.	Distances from Zero in Scale Divisions.	Mean of Measures in Arc.	Readings of Position-Circle.	Angle of Position.
		h. m.		div.	div.	″	° ′	° ′
1	Sept. 26	21 35	Σ 2426.	141·188	1·145		101 23	
2		37		·180	·137			
3		40		·210	·167	16·92		77 43
4		43		138·884	·159		97 9	
5		45		·885	·158			
6		47		·910	·133			
7	Sept. 27	21 30	Σ 2474.	141·177	1·140		283 0	
8		32		·189	·152			
9		34		·186	·149	16·88		258 29
10		42		138·881	·156		277 4	
11		44		·890	·147			
12		46		·900	·137			
13	Sept. 30	19 50	Σ 2052.	139·849	0·187		99 48	
14		52		·868	·168			
15		54		·859	·177	2·75		96 11
16		56		140·210	·174		135 39	
17		59		·220	·184			
18		20 1		·213	·177			
19		20 25	Σ 2159.	140·502	0·469		171 21	
20		27		·518	·485			
21		29		·487	·454	27·69		325 10
22		35		139·564	·469		162 5	
23		37		·551	·482			
24		39		·576	·457			
25		22 13	Σ 2277.	139·581	0·448		133 32	
26		15		·546	·483			
27		17		·563	·466	27·65		119 17
28		22		140·494	·465		148 8	
29		26		·486	·457			
30		28		·505	·476			

Assumed value of one division of the scale, 29″·424.
Assumed zero of position-circle, 21° 33′.

1, &c. Mags. 7·2 and 8·2; white and bluish.
7, &c. Mags. 6·5 and 7·2; white and bluish. Motion in distance?
13, &c. Stars equal; mag. 7·5; white. Very unsteady.
19, &c. Mags. 7·5 and 7·8; white. Method of half-distance.
25, &c. Mags. 6·3 and 8·0; bright white and dull white. Method of half-distance.

Nos. for Ref.	Day, 1864.	Sidereal Time.	Object.	Concluded Scale Readings.	Distances from Zero in Scale Divisions.	Mean of Measures in Arc.	Readings of Position-Circle.	Angle of Position.
		h. m.		div.	div.	″	° ′	° ′
1	Sept. 30	22 53	Σ 2372.	140·460	0·420		112 0	
2		55		·472	·432			
3		57		·443	·403			
4		23 2		139·622	·418	24·76	98 53	83 54
5		4		·643	·397			
6		6		·603	·437			
7	Oct. 5	20 42	Σ 2166.	139·611	0·438		129 50	
8		44		·572	·477			
9		46		·594	·455			
10		50		140·489	·440	27·19	112 43	279 44
11		52		·520	·471			
12		54		·507	·458			
13		22 0	Σ 2497.	139·511	0·520		201 54	
14		2		·509	·522			
15		4		·510	·521			
16		8		140·560	·529	30·60	194 38	356 43
17		10		·553	·522			
18		12		·541	·510			
19		22 25	{Σ 2562. Piazzi xix. 241.}	140·460	0·429		265 24	
20		27		·495	·464			
21		29		·490	·459			
22		35		139·595	·436	26·70	277 47	250 3
23		37		·574	·457			
24		39		·564	·467			
25		41		·585	·446			
26	Oct. 6	19 24	Σ 2007.	140·630	0·595		343 39	
27		25		·620	·585			
28		27		·602	·567			
29		30		139·461	·574	34·25	350 5	325 19
30		32		·454	·581			
31		34		·443	·592			

Assumed value of one division of the scale, 29″·424.
Assumed zero of position-circle, 21° 33′.

1, &c. Mags. 6·3 and 7·2; brilliant white and white. Method of half-distance. Motion in distance? After these observations the object-glass was adjusted.

7, &c. Mags. 6·7 and 7·5; white. Struve's magnitudes are 5·6 and 7·4. The difference of angle arises from want of correct focus. Method of half-distance.

13, &c. Mags. 7·0 and 7·5; white. Method of half-distance.

19, &c. Mags. 6·5 and 8·2; white and bluish. Method of half-distance.

26, &c. Mags. 6·3 and 7·0; yellowish white and white. Method of half-distance.

No. for Ref.	Day, 1864.	Sidereal Time.	Object.	Concluded Scale Readings.	Distances from Zero in Scale Divisions.	Mean of Measures in Arc.	Readings of Position-Circle.	Angle of Position.
		h. m.		div.	div.	"	° ′	° ′
1	Oct. 6	19 45	κ Herculis.	140·574	0·544		23 53	
2		46		·564	·534			
3		47		·560	·530	31·60		9 39
4		50		139·488	·542		38 31	
5		52		·491	·539			
6		55		·500	·530			
7	Nov. 16	1 56	Mars, Diameter.	141·282	0·576		125 12	
8		58		·280	·574			
9		2 0		·269	·563			
10		2		·272	·566			
11		5		·260	·554	16·62		103 39
12		13		140·146	·560		125 12	
13		15		·150	·556			
14		17		·144	·562			
15		19		·135	·571			
16		21		·133	·573			
17	Nov. 20	2 20	Mars, Transverse Diameter.	140·673	0·575		125 0	
18		22		·680	·582			
19		24		·670	·572			
20		26		·669	·571			
21		27		·690	·592	17·04		103 27
22		33		139·536	·562		125 0	
23		35		·514	·584			
24		36		·511	·587			
25		37		·526	·572			
26		40		·510	·588			
27		2 50	Mars, Tr. conj. Diameter.	139·524	0·566		35 0	
28		56		·502	·588			
29		58		·507	·583			
30		3 0		·519	·571			
31		2		·510	·580	17·01		13 27
32		5		140·662	·572		35 0	
33		7		·668	·578			
34		9		·662	·572			
35		11		·667	·577			
36		13		·680	·590			

Assumed value of one division of the scale, 29″·424.
Assumed zero of position-circle, 21° 33′.

1, &c. Mags. 5·5 and 6·0; yellow. No motion.

7, &c. Mars was at times tolerably distinct, but it was with great difficulty I could see the white spot at the south pole. The sky soon became so bad that I could measure only the polar diameter.

17, &c. Very good observations. The planet distinct and steady. Sky clear. I adjusted the zero to 140$^{\mathrm{div}}$.

Nos. for Ref.	Day, 1864.	Sidereal Time.	Object.	Concluded Scale Readings.	Distances from Zero in Scale Divisions.	Mean of Measures in Arc.	Readings of Position-Circle.	Angle of Position.
		h. m.		div.	div.	″	° ′	° ′
1	Nov. 24	0 43	Mars, Polar Diameter.	140·668	0·597		165 50	
2		45		·668	·597			
3		47		·627	·556			
4		48		·666	·595			
5		50		·645	·574			
6		56		139·482	·589	17·18	165 50	144 17
7		58		·489	·582			
8		1 0		·489	·582			
9		5		·493	·578			
10		7		·482	·589			
11		1 22	Mars, Equatorial Diameter.	139·463	0·613		76 10	
12		24		·503	·573			
13				·503	·573			
14		45		·477	·599			
15		50		·500	·576	17·24		54 37
16		52		140·667	·591		76 10	
17		58		·649	·573			
18		2 0		·650	·574			
19		5		·682	·606			
20	Nov. 25	2 32	Mars, Equatorial Diameter.	140·663	0·584		75 45	
21		34		·666	·587			
22		37		·650	·571			
23		39		·654	·375			
24		48		·631	·552			
25		50		139·498	·581	16·89	75 45	54 12
26		54		·503	·576			
27		56		·506	·573			
28		58		·510	·569			
29		60		·504	·575			

Assumed value of one division of the scale, 29″·424.
Assumed zero of position-circle, 21° 33′.

1, &c. I was very much troubled with the galvanic light, and at first with clouds.

20, &c. Much interrupted by clouds.

Nos. for Ref.	Day, 1864.	Sidereal Time.	Object.	Concluded Scale Readings.	Distances from Zero in Scale Divisions.	Mean of Measures in Arc.	Readings of Position-Circle.	Angle of Position.
		h. m.		div.	div.	″	° ′	° ′
1	Nov. 26	0 32	Mars, Polar Diameter.	139·490	0·580		165 3	
2		34		·500	·570			
3		35		·485	·585			
4		37		·501	·569			
5		39		·493	·577	16·95		143 30
6		43		140·650	·580		165 3	
7		45		·638	·568			
8		47		·633	·563			
9		49		·650	·580			
10		50		·657	·587			
11		1 3	Mars, Equatorial Diameter.	140·635	0·573		75 17	
12		5		·646	·584			
13		7		·649	·587			
14		9		·672	·610			
15		11		·656	·594	17·36		53 44
16		45		139·473	·589		75 17	
17		47		·475	·587			
18		49		·462	·600			
19		51		·466	·596			
20		53		·481	·581			
21	Nov. 28	1 40	Mars, Equatorial Diameter.	140·642	0·574		75 5	
22		41		·668	·600			
23		43		·642	·574			
24		45		·638	·570			
25		47		·647	·579	17·04		53 32
26		49		139·477	·591		75 5	
27		51		·478	·590			
28		53		·490	·578			
29		55		·503	·565			
30		57		·501	·567			

Assumed value of one division of the scale, 29″·424.
Assumed zero of position-circle, 21° 33′.

1. &c. A splendid sky. I was troubled with the bad action of the galvanic light.

11, &c. Interrupted by the failure of the galvanic light between $1^h\,11^m$ and $1^h\,45^m$. On turning the telescope round the axis from the polar to the equatorial contact of limbs, I found that the images, which were admirably in contact for the polar diameter, sensibly overlapped for the equatorial diameter. The measures confirm this.

21, &c. Mars frequently obscured by fog-cloud during the observations.

Nos. for Ref.	Day, 1864.	Sidereal Time.	Object.	Concluded Scale Readings.	Distances from Zero in Scale Divisions.	
		h. m.		div.	div.	
1	Nov. 28	2 6	Mars, Polar Diameter.	139·513	0·561	
2		8		·495	·579	
3		10		·501	·573	
4		13		·500	·574	
5		16		·497	·577	1
6		19		140·666	·592	
7		21		·649	·575	
8		22		·641	·567	
9		24		·640	·566	
10		26		·642	·568	
11	Nov. 29	3 40	Mars, Polar Diameter.	140·624	0·557	
12		44		·613	·546	
13		46		·623	·556	
14		48		·650	·583	
15		50		·651	·584	16·(
16		55		139·510	·557	
17		57		·507	·560	
18		59		·515	·552	
19		4 0		·490	·577	
20		2		·491	·576	
21		4 11	Mars, Equatorial Diameter.	139·497	0·563	
22		19		·515	·545	
23		23		·487	·573	
24		25		·481	·579	
25		29		·485	·575	16·68
26		31		140·628	·568	
27		33		·623	·563	
28		37		·636	·576	
29		40		·630	·570	
30		43		·621	·561	
31	Dec. 6	2 50	Mars, Polar Diameter.	139·483	0·558	
32		54		·487	·554	
33		3 0		·481	·560	
34		2		·489	·552	16·04
35		6		140·614	·573	
36		9		·588	·547	
37		12		·581	·540	
38		15		·602	·561	

Assumed value of one division of the scale, 29″·424.
Assumed zero of position-circle, 21° 33′.

21, &c. Cloudy at intervals.

31, &c. The galvanic [illegible] some, and fa[illegible]

Nos. for Ref.	Day, 1864.	Sidereal Time.	Object.	Concluded Scale Readings.	Distances from Zero in Scale Divisions.	Mean of Measures in Arc.	Readings of Position-Circle.	Angle of Position.
		h. m.		div.	div.	″	° ′	° ′
1	Dec. 12	0 18	Mars, Polar Diameter.	139·509	0·544		160 0	
2		20		·505	·548			
3		22		·515	·538			
4		24		·508	·545			
5		27		·510	·543	16·01		138 27
6		29		140·597	·544			
7		31		·592	·539			
8		32		·602	·549			
9		35		·594	·541			
10		36		·601	·548			
11		0 44	Mars, Equatorial Diameter.	140·599	0·567		250 23	
12		46		·598	·566			
13		48		·589	·557			
14		50		·578	·546			
15		52		·598	·566	16·48		48 50
16		55		139·480	·552			
17		57		·471	·561			
18		58		·462	·570			
19		1 0		·474	·558			
20		2		·480	·552			

Assumed value of one division of the scale, 29″·424.
Assumed zero of position-circle, 21° 33′.

1, &c. The illumination of the scale was produced by means of loose wires connected with the battery and the contact-piece, the communication having failed inside the telescope at the declination-axis. The sky rather hazy. Mars unsteady.

11, &c. On turning round the telescope the images appeared as well in contact for the equatorial diameter as for the polar diameter.

Catalogue of the Distances and Angles of Position of Double Stars, observed with the Heliometer, at the Radcliffe Observatory, Oxford, in the Year 1864.

No.	Name of Star.	Approx. R.A., 1864.	Approx. N.P.D., 1864.	Days of Observation.	Fraction of the Year.	Measured Distance.	Angle of Position.	Mags.	Colour, &c.
		h. m. s.	° ′	1864.		″	° ′		
1	Σ 155 ………	1 37 3	81 12	Sep. 19	0·72	4·55	329 12	7·8, eq.	White.
2	Σ 291 ………	2 33 30	71 47	Feb. 16	·13	3·34	112 42	7·5, eq.	White.
3	Σ 369 ………	3 8 19	50 1	Mar. 30	·24	3·63	25 51	6·5 & 7·3	White.
4	Σ 391 ………	3 19 55	45 26	Apr. 2	·25	3·81	95 3	7·0 & 7·4	Brilliant white.
5	Σ 425 ………	3 31 31	56 20	Mar. 24	·23	2·62	103 42	8·0, eq.	White.
6	Σ 645 ………	5 1 13	62 9	Apr. 20	·30	12·17	26 39	6·2 & 8·0	Yellow & bluish.
7	Σ 648 ………	5 2 12	58 8	Apr. 12	·28	4·56	72 54	7·0 & 7·8	White.
8	Σ 698 ………	5 16 11	55 16	Apr. 20	·30	31·49	345 28	6·8 & 8·0	White.
9	Σ 813 ………	5 45 9	71 5	Mar. 30	·24	3·34	140 53	8·2, eq.	Brilliant white.
10	Σ 848, A. B.…	6 0 47	76 1	Mar. 24	·23	2·91	103 7	7·0 & 8·0	White.
11	Σ 877 ………	6 6 57	75 23	Apr. 13	·28	5·62	263 51	7·0 & 7·2	White.
12	Σ 880 ………	6 7 57	79 23	Apr. 13	·28	5·40	55 4	8, eq.	White.
13	Σ 899 ………	6 14 54	72 22	Mar. 30	·24	2·25	12 12	7·2 & 7·6	Brilliant white.
14	Σ 981 ………	6 46 44	59 39	Mar. 30	·24	3·49	140 21	7·8, eq.	White.
15	Σ 1027 ………	7 0 55	72 53	Apr. 12	·28	6·62	356 46	7·8, eq.	White.
16	Σ 1029 ………	7 1 13	94 28	Apr. 2	·25	2·34	15 51	7·5 & 8·0	White.
17	Castor ………	7 25 55	57 49	Mar. 24	·23	5·58	239 13	3·0 & 3·5	White.
18	Σ 1177 ………	7 57 17	62 5	Mar. 30	·24	3·62	348 12	6·5 & 7·2	Brightwhite & dullwhite.
19	Σ 1255 ………	8 32 29	83 44	Apr. 13	·28	27·42	30 6	6·5 & 7·0	Brilliant white & dull white.
20	Σ 1263 ………	8 36 12	47 48	Apr. 19	·30	29·72	16 47	7·0 & 7·2	White.
21	Σ 1276 ………	8 39 46	78 21	Apr. 12	·28	12·46	353 40	7·5 & 7·7	White.
22	Σ 1283 ………	8 42 21	74 40	May 7	·35	16·54	124 58	6·5 & 7·0	White.
23	Σ 1280 ………	8 42 40	18 41	June 7	·43	6·50	34 7	7·7, eq.	White.
24	σ^4 Cancri ……	8 53 3	57 13	Apr. 20	·30	4·36	135 51	6·0 & 8·0	White & blue.
25	Σ 1311 ………	8 59 37	66 28	May 7	·35	7·19	199 9	6·5 & 7·0	White.
26	Σ 1312 ………	9 0 37	37 4	June 6	·43	4·78	141 44	8·0 & 8·2	Bright white.
27	Σ 1332 ………	9 9 28	65 46	May 7	·35	5·72	19 47	7·5 & 7·7	White.
28	21 Ursæ Maj…	9 15 59	35 24	June 6	·43	5·72	309 56	7·8, eq.	White & bluish.
29	Σ 1349 ………	9 19 33	21 52	June 16	·46	18·83	165 5	6·7 & 7·7	Brightwhite & dullwhite.
30	Σ 1355 ………	9 20 8	83 10	Apr. 2	·25	2·69	315 42	7·6, eq.	White.

No.	Name of Star.	Approx. R.A., 1864.	Approx. N.P.D., 1864.	Days of Observation.	Fraction of the Year.	Measured Distance.	Angle of Position.	Mags.	Colour, &c.
		h. m. s.	° ′	1864.		″	° ′		
31	Σ 1350, A,B....	9 22 59	22 36	June 8	0·44	10·42	246 28	7·3 & 7·5	White.
32	Σ 1360	9 23 18	78 48	Apr. 12	·28	14·24	242 25	8·0, eq.	White.
33	Σ 1362	9 24 53	16 19	June 6	·43	5·02	133 7	7·0, eq.	Brilliant white.
34	Σ 1376	9 36 25	46 8	June 8	·44	5·22	308 52	8·2, eq.	White.
35	Σ 1402	9 55 44	33 51	June 21	·47	23·54	98 6	7·0 & 8·0	Reddish yellow & bluish
36	Σ 1415	10 6 53	18 15	June 21	·47	16·83	167 47	6·0 & 6·3	Brilliant white.
37	Σ 1427, A,B....	10 13 47	45 24	June 15	·45	9·27	214 58	7·2 & 7·5	White.
38	Σ 1442	10 24 32	67 15	Apr. 12	·28	13·36	154 34	7·0 & 7·2	Brilliant white.
39	Σ 1474, B,C....	10 40 55	104 32	Apr. 19	·30	6·52	198 28	7·6, eq.	White.
40	Σ 1516	11 6 18	15 47	June 8	·44	4·43	71 25	7·1 & 7·2	White.
41	Σ 1521	11 8 3	61 41	Apr. 14	·28	3·68	92 51	7·2 & 7·4	Brilliant white.
42	Σ 1520	11 8 13	36 29	June 16	·46	13·11	343 59	6·0 & 7·2	Brilliant white.
43	Σ 1527	11 11 52	74 59	Apr. 18	·30	3·88	13 42	7·2 & 8·0	Yellowish; and gray or bluish.
44	57 Ursæ Maj....	11 21 45	49 56	June 6	·43	4·72	355 36	5·0 & 8·0	White & bluish.
45	Σ 1544	11 23 36	29 33	June 16	·46	12·34	90 49	7·0 & 7·8	White.
46	Σ 1553	11 29 9	33 6	June 7	·43	5·53	168 45	7·0 & 7·2	Yellowish white.
47	Σ 1561, A,B....	11 31 37	44 8	June 15	·45	10·25	263 12	6·3 & 7·5	Bright white & bluish.
48	Σ 1561, B,C....	,,	,,	June 15	·45	82·27	268 38	6·3 & 7·5	Bright white & white.
49	Σ 1573	11 41 45	21 55	June 15	·45	11·33	177 15	6·3 & 7·0	Bright white & bluish.
50	Σ 1575	11 44 58	80 24	Apr. 18	·30	31·78	210 13	7·0 & 7·5	Brilliant white.
51	2 Comæ.........	11 57 19	67 47	Mar. 24	·23	3·88	235 32	6·5 & 7·5	....
52	Σ 1600	11 58 38	37 18	Apr. 14	·28	7·75	93 40	7·0 & 8·0	Brilliant white & dusky white.
53	Σ 1607	12 4 41	53 9	Apr. 23	·31	31·63	357 56	7·5 & 8·0	White.
54	Σ 1608	12 4 42	35 49	June 15	·45	10·87	223 45	7·2, eq.	Brilliant white.
55	Σ 1615	12 7 16	56 27	Apr. 19	·30	26·95	87 30	6·5 & 8·2	Yellowish & bluish.
56	Σ 1633	12 13 50	62 11	Apr. 19	·30	8·99	245 1	6·5, eq.	Brilliant white.
57	Σ 1645	12 21 29	44 27	Apr. 19	·30	10·55	158 30	7·3 & 7·6	Brilliant white.
58	Σ 1659, A,B....	12 28 42	101 16	Apr. 14	·28	26·57	351 57	7·2, eq.	White.
59	γ Virginis......	12 34 46	90 42	May 24	·39	4·30	167 21	......	....
	,,	,,	,,	May 28	·41	4·24	164 4	......	....
60	Σ 1696	12 50 52	58 53	Apr. 18	·30	3·88	202 28	8·3, eq.	White.
61	Σ 1740	13 16 44	86 34	Apr. 18	·30	27·36	75 23	7, eq.	Brilliant white.
62	Σ 1760	13 28 1	63 1	Apr. 13	·28	8·81	63 8	8, eq.	White.
63	o Virginis	13 36 14	85 46	Mar. 29	·24	3·52	228 58	5·7 & 8·0	White & bluish.
64	Σ 1838	14 17 28	78 7	Apr. 13	·28	8·84	335 14	7, eq.	Brilliant white.

No.	Name of Star.	Approx. R.A., 1864.	Approx. N.P.D., 1864.	Days of Observation.	Fraction of the Year.	Measured Distance.	Angle of Position.	Mags.	Colour, &c.
		h. m. s.	° ′	1864.		″	° ′		
65	Σ 1850	14 22 34	61 8	Apr. 22	0·31	25·19	263 14	6·5 & 6·8	White.
66	Σ 1858	14 28 1	53 49	Apr. 14	·28	2·07	25 35	7·8, eq.	Yellowish white.
67	Σ 1962	15 31 20	98 20	May 28	·41	11·61	188 57	6·2 & 6·5	White.
68	π^1 Ursæ Min. B.A.C. 5205	15 37 14	9 6	Apr. 18	·30	30·84	83 54	6·2 & 6·8	White.
69	Σ 1985	15 48 52	91 45	June 7	·43	5·33	325 36	7·0 & 8·0	White.
70	Σ 1999	15 56 57	101 4	May 28	·41	10·80	101 22	7·5 & 8·0	White.
71	Σ 2007	15 59 43	76 18	Oct. 6	·76	34·25	325 19	6·3 & 7·0	Yellowish white.
72	κ Herculis......	16 1 57	72 35	Oct. 6	·76	31·60	9 39	5·5 & 6·0	Yellow.
73	Σ 2052	16 22 55	71 18	Sep. 30	·75	2·75	96 11	7·5, eq.	White.
74	Σ 2159	17 18 40	76 33	Sep. 30	·75	27·69	325 10	7·5 & 7·8	White.
75	Σ 2166	17 21 31	78 30	Oct. 5	·76	27·19	279 44	6·5 & 7·5	White.
76	Σ 2273	17 58 30	25 51	Apr. 14	·28	20·52	282 1	6·5 & 6·7	Brilliant white & dull [white.
77	Σ 2277	17 59 36	41 33	Sep. 30	·75	27·65	119 17	6·3 & 8·0	,, ,,
78	Σ 2372	18 37 14	55 23	Sep. 30	·75	24·76	83 54	6·3 & 7·2	Brilliant white & white.
79	Σ 2426	18 53 41	77 18	Sep. 26	·74	16·92	77 43	7·2 & 8·2	White & bluish.
80	Σ 2474	19 4 5	55 38	Sep. 27	·74	16·88	258 29	6·5 & 7·2	White & bluish.
81	Σ 2497	19 13 20	84 40	Oct. 5	·76	30·60	356 43	7·0 & 7·5	White.
82	β Cygni	19 25 14	62 19	Aug. 15	·62	34·25	55 50	3·0 & 7·0	Orange & *green*.
83	Piazzi xix. 186 Σ 2545	19 31 15	100 27	Sep. 26	·74	3·68	314 7	7·2 & 8·4	White.
84	Piazzi xix. 241 Σ 2562	19 36 12	81 57	Oct. 5	·76	26·70	250 3	6·5 & 8·2	White & bluish.
85	Σ 2619	19 57 0	42 7	May 28	·41	4·00	240 17	8·2, eq.	White.
86	Σ 2655	20 8 8	68 11	Aug. 13	·62	6·14	1 2	7·2, eq.	Bluish white.
87	Σ 2691	20 24 38	52 20	Aug. 26	·65	16·89	32 37	7·0 & 7·5	White.
88	Σ 2701	20 30 30	78 26	Aug. 31	·67	1·57	214 46	7·7 & 8·0	White.
89	Σ 2725	20 39 53	74 36	Aug. 13	·62	4·99	358 21	6·8 & 7·5	Bright white & dull [white.
90	Piazzi xx. 376 Σ 2735	20 48 52	85 59	Aug. 29	·66	2·03	285 14	6·5 & 7·6	White & bluish.
91	Σ 2747	20 57 3	52 53	Aug. 18	·63	4·81	256 23	8·0, eq.	White.
92	Σ 2767	21 4 17	70 36	Aug. 31	·67	2·80	31 59	7·5 & 8·0	White.
93	Σ 2765	21 4 21	81 1	Aug. 29	·66	3·16	88 4	7·8, eq.	White.
94	Σ 2769	21 4 25	68 6	Aug. 26	·65	18·24	300 24	6·2 & 6·7	Brilliant white.
95	Σ 2786	21 13 1	81 3	Aug. 31	·67	2·75	188 17	7·0 & 7·5	Brilliant white.
96	Σ 2789	21 15 36	37 36	Aug. 20	·64	6·02	115 44	7·2, eq.	White.
97	Σ 2797	21 20 11	76 54	Aug. 29	·66	3·38	214 32	7·0 & 8·2	White.
98	Σ 2802	21 26 5	56 47	Aug. 31	·67	3·97	12 23	8·0, eq.	White.
99	Σ 2804	21 26 41	69 54	Aug. 31	·67	2·85	327 0	6·7 & 7·0	Brilliant white.

No.	Name of Star.	Approx. R.A., 1864.	Approx. N.P.D., 1864.	Days of Observation.	Fraction of the Year.	Measured Distance.	Angle of Position.	Mags.	Colour, &c.
		h. m. s.	° ′	1864.		″	° ′		
100	Σ 2840	21 47 25	34 51	Aug. 29	0·66	18·66	194 15	6·0 & 6·3	Brilliant white & duller [white.
101	Σ 2841	21 47 54	70 56	Aug. 26	·65	21·55	111 47	6·5 & 7·6	White & bluish.
102	Σ 2862	22 0 8	90 6	Sep. 19	·72	2·21	84 53	7·8 & 8·0	White.
103	Σ 2873	22 3 0	7 48	Aug. 23	·64	13·30	74 7	6·5 & 7·0	White.
104	Σ 2883	22 7 33	20 33	Aug. 25	·65	14·64	254 4	6·5 & 8·0	White & bluish.
105	Σ 2893	22 10 24	17 23	Aug. 26	·65	29·60	348 51	6·0 & 7·5	Brilliant white & bluish [white.
106	Σ 2903	22 17 42	23 59	Aug. 18	·63	4·28	93 34	7·2 & 8·0	White & blue.
107	Σ 2902	22 17 52	45 21	Aug. 13	·62	6·12	88 37	7·0 & 7·5	Bright white & livid [white.
108	Σ 2917	22 25 12	37 10	Aug. 18	·63	4·49	69 59	8·0, eq.	White.
109	Σ 2946	22 43 31	50 12	Aug. 13	·62	4·96	262 31	7·2 & 7·4	White.
110	Σ 2947	22 44 23	22 9	Sep. 9	·69	3·25	72 51	7·2, eq.	White.
111	Σ 2988	23 4 53	102 41	Sep. 19	·72	3·68	276 16	7·6, eq.	White.
112	Σ 3017	23 22 18	16 38	Sep. 26	·74	2·22	27 37	7·5 & 8·0	White.
113	Σ 3061	23 58 46	72 55	Sep. 19	·72	7·44	145 24	8·0, eq.	White.

Results of the Measures of the Diameters of the Planets Venus and Mars, made with the Heliometer, in the Year 1864.

VENUS.

Day and Hour of Observation, 1864.	Measured Diameter.	Angle of Position.	Day and Hour of Observation, 1864.	Measured Diameter.	Angle of Position.
d. h.	"	° ′	d. h.	"	° ′
Feb. 3 21	14·04	0 5	Apr. 18 21	9·86	330 37
Apr. 13 21	10·12	341 18	20 21	9·21	335 57
14 21	10·48	341 23	22 22	9·89	332 48

MARS.

Day and Hour of Observation, 1864.	Measured Equatl. Diameter.	Corr. for Defect of Illumn.	Corrected Equatl. Diameter.	Angle of Position.	Measured Polar Diameter.	Corr. for Defect of Illumn.	Corrected Polar Diameter.	Angle of Position.	Equatl. Diam. at Distance Unity.
d.	"	"	"	° ′	"	"	"	° ′	"
Nov. 24	17·24	0·03	17·27	54 37	17·18	0·01	17·19	144 17	9·22
25	16·89	·03	16·92	54 12	......	......	......	......	9·04
26	17·36	·02	17·38	53 44	16·95	·00	16·95	143 30	9·29
28	17·04	·00	17·04	53 32	16·86	·00	16·86	143 31	9·14
29	16·68	·00	16·68	53 30	16·62	·00	16·62	143 32	8·96
Dec. 6	......	......	......	......	16·04	·01	16·05	140 34	......
12	16·48	·08	16·56	48 50	16·01	·04	16·05	138 27	9·43
								Mean =	9·18

On Nov. 20 two diameters were measured as nearly as could be judged at angles making 45° with the equatorial and polar diameters, or at angles of position 103° 27′ and 13° 27′ respectively. The measured diameters corrected for defect of illumination were 17″·13 and 17″·03.

OBSERVATIONS

OF AN

ECLIPSE OF JUPITER'S FIRST SATELLITE;

AND OF

OCCULTATIONS OF STARS BY THE MOON,

WITH THE REDUCTION OF THE

OCCULTATIONS:

MADE AT THE RADCLIFFE OBSERVATORY,

OXFORD,

IN THE YEAR

1864.

Eclipse of Jupiter's First Satellite.

1864, June 1. Jupiter I. Eclipse, disappearance. Observed by Mr. QUIRLING with the 10-foot equatorial telescope and a chronometer.

Observed chronometer time reduced to transit clock time, $15^h\ 10^m\ 50^s{\cdot}33$.

	h.	m.	s.
Sidereal time,	15	11	43·12.
Oxford mean solar time,	10	29	5·80.
Greenwich mean solar time,	10	34	8·40.

The observation was made through an opening of the clouds, and may be probably considerably too late.

Mr. QUIRLING while watching the planet observed several small, well-defined circular black spots of different sizes transiting the disk from west to east in different parallels with uniform motions. Each occupied about 2^s of time in transiting the disk. On turning the eye-piece round, he still saw them moving in the same direction.

Occultations of Stars by the Moon, &c.

1864, March 18. Disappearance of A^2 Cancri (at the moon's dark limb) at $9^h\ 27^m\ 10^s{\cdot}0$, chronometer time. Observed by Mr. LUCAS with the 10-foot telescope. The observation good. The observation, reduced to the time of the transit clock, by a comparison made at the time, gives $9^h\ 22^m\ 28^s{\cdot}1$, the clock being $4^s{\cdot}3$ slow.

	h.	m.	s.
Hence, Sidereal time of disappearance,	9	22	32·4.
Oxford mean solar time,	9	35	45·4.
Greenwich mean solar time,	9	40	48·0.

Using the usual notation, the elements for the computation of the occultation are as follows:—

	°	′	″
R.A. of Zenith in arc,	140	38	$6{\cdot}00 + 15{\cdot}00 \times t$.
R.A. of Moon's centre in arc,	129	45	$16{\cdot}50 + 0{\cdot}4861 \times t + x$.
N.P.D. of Moon's centre,	76	43	$51{\cdot}03 + 0{\cdot}1342 \times t + y$.
Moon's hor. eq. parallax,		54	$3{\cdot}17 \times \left(1 + \frac{m}{1000}\right)$.
Moon's semidiameter,		14	$45{\cdot}19 \times \left(1 + \frac{n}{1000}\right)$.
Star's R.A. in arc,	129	52	$44{\cdot}55 + e$.
Star's N.P.D.,	77	23	$51{\cdot}40 + f$.
Geoc. R.A. of corresponding point in arc,	129	59	$10{\cdot}08 + e + 0{\cdot}1490 \times t + 0{\cdot}3855 \times m$.
Geoc. N.P.D. of corresponding point,	76	49	$48{\cdot}27 + f - 0{\cdot}0060 \times t - 2{\cdot}0431 \times m$.

Geoc. distance of centre from corresponding point,

$$14'\ 46''{\cdot}64 + 0{\cdot}8910 \times \{+e - x - 0{\cdot}3371 \times t + 0{\cdot}3855 \times m\}.$$
$$-0{\cdot}4017 \times \{y + 0{\cdot}1342 \times t\}.$$
$$+0{\cdot}4025 \times \{f - 0{\cdot}0060 \times t - 2{\cdot}0431 \times m\}.$$

Final equation,

$$-1''{\cdot}45 = +0{\cdot}8910 \times e + 0{\cdot}4025 \times f - 0{\cdot}8910 \times x - 0{\cdot}4017 \times y - 0{\cdot}3568 \times t - 0{\cdot}4788 \times m - 0{\cdot}8852 \times n.$$

1864, March 19. Reappearance of ω Leonis (at the moon's bright limb) at $7^h\ 17^m\ 7^s$, chronometer time, equivalent to $7^h\ 12^m\ 22^s\cdot1$ transit clock time. Observed by Mr. QUIRLING with the 10-foot telescope. The observation good. The transit clock was $3^s\cdot6$ slow.

	h.	m.	s.
Hence, Sidereal time of reappearance,	7	12	25·7.
Oxford mean solar time,	7	22	4·1.
Greenwich mean solar time,	7	27	6·7.

The elements for the computation are :—

	°	′	″ ″
R.A. of Zenith in arc,	108	6	$25{\cdot}50 + 15{\cdot}00 \times t$.
R.A. of Moon's centre in arc,	140	13	$37{\cdot}95 + 0{\cdot}4766 \times t + x$.
N.P.D. of Moon's centre,	79	50	$52{\cdot}12 + 0{\cdot}1513 \times t + y$.
Moon's hor. eq. parallax,		54	$3{\cdot}14 \times \left(1 + \frac{m}{1000}\right)$.
Moon's semidiameter,		14	$45{\cdot}17 \times \left(1 + \frac{n}{1000}\right)$.
Star's R.A. in arc,	140	18	$13{\cdot}65 + e$.
Star's N.P.D.,	80	21	$28{\cdot}70 + f$.
Geoc. R.A. of corresponding point in arc,	140	0	$4{\cdot}51 + e + 0{\cdot}1268 \times t - 1{\cdot}0891 \times m$.
Geoc. N.P.D. of corresponding point,	79	44	$34{\cdot}65 + f + 0{\cdot}0132 \times t - 2{\cdot}2141 \times m$.

Geoc. distance of centre from corresponding point,

$$14'\ 45''{\cdot}10 + 0{\cdot}8902 \times \left\{-e + x + 0{\cdot}3498 \times t + 1{\cdot}0891 \times m\right\}.$$
$$+ 0{\cdot}4268 \times \left\{y + 0{\cdot}1513 \times t\right\}.$$
$$- 0{\cdot}4262 \times \left\{f + 0{\cdot}0132 \times t - 2{\cdot}2141 \times m\right\}.$$

Final equation,

$$+0''{\cdot}07 = -0{\cdot}8902 \times e - 0{\cdot}4262 \times f + 0{\cdot}8902 \times x + 0{\cdot}4268 \times y + 0{\cdot}3704 \times t + 1{\cdot}9131 \times m - 0{\cdot}8852 \times n.$$

1864, April 11. Reappearance of χ^2 Orionis (at the moon's bright limb) at $8^h\ 51^m\ 21^s\cdot0$, time by journeyman clock, the clock being $11^s\cdot0$ slow of the transit clock, and the transit clock $3^s\cdot8$ fast of sidereal time. Observer, Mr. LUCAS.

	h.	m.	s.
Hence, Sidereal time of reappearance,	8	51	28·2.
Oxford mean solar time,	7	30	24·5.
Greenwich mean solar time,	7	35	27·1.

The elements for the computation are :—

	°	′	″ ″
R.A. of Zenith in arc,	132	52	$3{\cdot}00 + 15{\cdot}00 \times t$.
R.A. of Moon's centre in arc,	87	24	$26{\cdot}25 + x + 0{\cdot}5535 \times t$.
N.P.D. of Moon's centre,	69	51	$27{\cdot}17 + y + 0{\cdot}0283 \times t$.
Moon's hor. eq. parallax,		55	$41{\cdot}40 \times \left(1 + \frac{m}{1000}\right)$.
Moon's semidiameter,		15	$12{\cdot}03 \times \left(1 + \frac{n}{1000}\right)$.
Star's R.A. in arc,	86	43	$46{\cdot}05 + e$.
Star's N.P.D.,	70	16	$54{\cdot}70 + f$.
Geoc. R.A. of corresponding point in arc,	87	10	$18{\cdot}87 + e + 0{\cdot}1125 \times t + 1{\cdot}5927 \times m$.
Geoc. N.P.D. of corresponding point,	69	44	$2{\cdot}08 + f - 0{\cdot}0371 \times t - 1{\cdot}9726 \times m$.

Geoc. distance of centre from corresponding point,

$$15'\ 11''{\cdot}32 + 0{\cdot}8189 \times \left\{-e + x + 0{\cdot}4410 \times t - 1{\cdot}5927 \times m\right\}.$$
$$+ 0{\cdot}4890 \times \left\{y + 0{\cdot}0283 \times t\right\}.$$
$$- 0{\cdot}4874 \times \left\{f - 0{\cdot}0371 \times t - 1{\cdot}9726 \times m\right\}.$$

Final equation,

$$+0''{\cdot}71 = -0{\cdot}8189 \times e - 0{\cdot}4874 \times f + 0{\cdot}8189 \times x + 0{\cdot}4890 \times y + 0{\cdot}3930 \times t - 0{\cdot}3427 \times m - 0{\cdot}9120 \times n.$$

RESULTS

OF

METEOROLOGICAL OBSERVATIONS

MADE IN THE YEAR

1864,

AT THE RADCLIFFE OBSERVATORY,

OXFORD.

INTRODUCTION.

rological observations were, as
Lucas, who took the general
nnected with this department
charge of the Meteoro-Photo-
paration of the photographic
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ting the assumed zeros of the
charged generally with the
greater portion of the dis-
ıalities of the meteorological
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uments.

364 were identically the same
sirable to repeat the account
preceding volumes.

in the N.E. corner of the
elevation of 2½ feet above the
28 inches in diameter. The
by the apex of an inverted
mercury in the reservoir is
l read to ·002 of an inch.

l 1838, is in the quadrant

the Heliometer Dome, but
of Newman in the transit
r was under repair. This
ıstment of the level of the
ts tube is half an inch in

3. A *Dry Bulb Thermometer*, N°. 230, by Negretti and Zambra, used as the standard.

4. A *Wet Bulb Thermometer*, N°. 230, by ditto.

5. A *Dry Bulb Maximum* and a *Dry Bulb Minimum Thermometer*, N^os^. 1056 and 652, by ditto.

6. A *Wet Bulb Maximum* and a *Wet Bulb Minimum Thermometer*, N^os^. 1055 and 740, by the same makers.

These thermometers are all placed on one frame, about 4½ feet above the ground, within a penthouse situated on the north side of the Observatory, outside the circle room, and at a distance of about 6 feet from the wall. The penthouse is so constructed of open work as to allow a perfectly free passage of air, and, at the same time, to afford a good protection to the instruments from storms and rain.

All these instruments were compared by Mr. Glaisher with his standard previously to their being sent to Oxford, and their corrections were found to be small.

7. A *Sky-radiation Thermometer,* placed on the grass in the north garden in an exposed situation.

8. A *Solar-radiation Thermometer,* with blackened bulb, placed in a niche in the south wall of the west wing of the Observatory, outside the transit circle room. The one in use up to September 11 was broken on that day, and a new one was supplied by Messrs. Negretti and Zambra on September 16, and placed outside the window of the octagon room.

9. A *Self-registering Max. and Min. Thermometer* by Troughton and Simms, placed on a frame at the top of the tower.

In connexion with the barometer it may be mentioned that the height of the cistern above the mean level of the sea has been for some years assumed by Mr. Johnson to be 210 feet, by comparison of the mean yearly pressures with that given by Kaemtz as the pressure at the mean level of the sea, namely $29^{\text{in}}\cdot975$ for latitudes near the Oxford parallel. The height of 210 feet is assumed in the reductions of 1864.

This assumption (210 feet) is essentially confirmed by the spirit-levellings taken in connexion with the Ordnance Survey*. At page 237 of the work of which the title is given beneath, it is stated that "a mark on plinth in wall opposite the Observatory, 1·58 feet above the surface, is 209·686 feet above the mean level of the sea at Liverpool." The surface of the ground, therefore, at this point (that is, at a point in the east wall of the grounds of the Observatory) is 208·1 feet above the sea level; and, assuming that there is no variation of level between this point and the ground outside the transit circle room, in which the barometer is placed, this will give about 212 feet for the height of the cistern.

10. Four *Rain-gauges.* One is placed on the grass-plot north of the Observatory; and a second above the parapet of the roof of the east wing of the building, at the height of 24 feet. The latter communicates with a tube leading to a receiving vessel in the north-

* *Abstracts of the Principal Lines of Spirit-Levelling in Englandand Wales.* By Colonel Sir Henry James, R.E., F.R.S. London, 1861.

west corner of the quadrant room, and, when the quantity is small, a portion of it may be lost by transmission through the tube. The rain is poured into a graduated glass vessel of one inch diameter, for the purpose of being measured. A little evaporation may take place in the gauge on the ground, but as the rain is measured every day no sensible loss is experienced. Of the two others, the first is at an elevation of 22 feet, on the small building formerly used for mounting the anemograph, and the second on the top of the tower. For small quantities the record is usually too small, as in the case of the gauge above the roof of the east wing of the building.

Photographic Instruments.

In these there has been no organic change since the preceding year. They consist of the following:—

1. A *Barograph*, placed in a small north room between the transit circle room and the old circle room, for a description of which, together with an account of the method of deducing the value of the scale, &c., the volumes for 1854 and 1855 of the *Radcliffe Observations* may be consulted.

The following Table gives the results of the comparison of the mean values of the register at 2^h, 10^h, and 22^h of each day, with the mean readings of the barometer in ordinary use at the same hours, corrected for capillarity and reduced to 32°.

Month, 1864.	Barograph.	Barometer.	Excess of Barograph.
	in.	in.	in.
January	29·997	29·981	+ 0·016
February	29·757	29·735	+ ·022
March	29·466	29·411	+ ·055
April	29·887	29·823	+ ·064
May	29·795	29·732	+ ·063
June............	29·750	29·689	+ ·061
July............	29·817	29·760	+ ·057
August.........	29·890	29·833	+ ·057
September ...	29·719	29·660	+ ·059
October	29·646	29·584	+ ·062
November ...	29·568	29·509	+ ·059
December......	29·812	29·746	+ ·066

A glance at the preceding Table will shew that a considerable change took place between February and March in the difference between the results of the barograph and barometer. In explanation of this it must be stated that on February 22 the barometer (Newman) was taken down for some repairs and reinstated on March 4, that by

Jones being used in its place. On this latter are marked two indexes at a distance of 0·05 of an inch, and, till March 13, Mr. Lucas used the upper index, giving the greater, and, as has been subsequently proved, nearly correct reading. On comparing, however, with Newman after it was reinstated, and observing that its readings were higher than the latter by about the amount of the difference of the indexes, he adopted the readings of the lower index, and continued the use of it afterwards throughout the year, Newman not being in a satisfactory condition for use. Mr. Lawson made several unsuccessful attempts to fill the tube satisfactorily, but it was found that the bubbles in the mercury could not be got rid of. This barometer was not used again during the year.

A recent comparison with a barometer by Casella, kindly brought to the Observatory for the purpose by H. G. Madan, Esq. of Queen's College, (and which he had previously compared with an unexceptionable standard,) shewed that, using the lower index of Jones, its readings were lower than the standard by $0^{in}·063$, and, using the upper index, by $0^{in}·012$. Hence, as Jones has been constantly used since March 1864, its readings require the correction +0·063.

During the greater portion of 1865 and 1866 Newman was mounted side by side with Jones, and a series of comparisons shewed that (using the lower index of Jones) its readings agreed almost exactly, the difference being in 1865 $0^{in}·012$ smaller, and in 1866 $0^{in}·011$ larger than Jones. Hence no suspicion existed of any serious error till, at the end of 1866, Mr. Lawson accurately measured the distance between the ivory point and the mark denoting $30^{in}·000$ on the scale of Newman, and found that it exceeded the exact length of thirty inches by $0^{in}·06$, so that the readings of both Jones and Newman must have been too small to that amount since March 1864. And this agrees well with the comparison made with the barometer by Casella kindly lent by Mr. Madan.

As *all* the Meteorological Results for 1864 are those given by the barograph, no error arises; but as Jones was used from March for the Astronomical Observations of zenith distance, all the N.P.D.'s given in the catalogue of Stars for 1864 will require correction, and this correction can be easily incorporated with the final corrections ultimately to be applied.

It is plain that the barometer Newman must have received some injury or slight dislocation of its scale at the time of its being taken down in February 1864, and the accurate length has been very carefully restored since the discovery. It is not, however, yet reinstated.

2. A *Thermograph*, for observing the temperature of the air.
3. A *Hygrograph*, for observing the temperature of evaporation.

These instruments were furnished by Mr. Adie, of the Strand, London, in 1861, to replace others of which the scales were such that the photographic traces inconveniently interfered with each other. (See Introduction to *Meteorological Observations* for 1861, page [6].)

The values of the divisions and of the zeros of the photographic scales for these thermometers (used till the end of June) were determined in 1863, by an elaborate comparison of the results of the scale-readings with those of the dry and wet bulb thermometers, between temperatures ranging from 30° to 78° of the air-temperature taken from the observations of 1861. Another scale was determined at the end of June from the observations of 1864, and used from that time. The Table beneath gives the results of the comparison of the deduced temperatures with those daily read from the dry and wet thermometers.

Comparison of Thermograph and Hygrograph with Standard Dry and Wet Bulb Thermometers.

Month, 1864.	Thermo-graph.	Dry Ther-mometer.	Excess of Thermo-graph.	Hygro-graph.	Wet Ther-mometer.	Excess of Hygro-graph.
	°	°	°	°	°	°
January	40·3	40·4	−0·1	39·0	39·3	−0·3
February	37·9	37·7	+0·2	36·4	36·5	−0·1
March	43·0	43·1	−0·1	40·1	40·4	−0·3
April	51·0	50·0	+1·0	47·0	46·3	+0·7
May	57·9	56·9	+1·0	53·4	53·1	+0·3
June............	60·8	60·1	+0·7	55·0	55·6	−0·6
July	63·8	64·0	−0·2	56·9	57·6	−0·7
August.........	61·5	61·5	0·0	55·1	55·0	+0·1
September ...	58·7	59·1	−0·4	56·2	55·3	+0·9
October	51·9	52·0	−0·1	48·2	48·8	−0·6
November ...	43·5	43·2	+0·3	41·7	41·4	+0·3
December ...	39·7	39·0	+0·7	38·5	38·2	+0·3

The Thermograph and Hygrograph are placed side by side on the same metal frame, and the case which holds the camera and the whole apparatus is placed very near that containing the other thermometers, at a distance of about 8 feet from the north wall of the west wing of the Observatory. For a detailed description of these instruments the volumes for 1854 and 1855 may be consulted. For these and all the other photographical instruments gas is employed.

4. An *Anemograph*, for registering continuously the velocity and direction of the wind. A full description of this instrument, accompanied by engravings, is given in vol. xvii (for 1856) of the

Radcliffe Observations. It was originally mounted on a small building on the north side of the Observatory, (but at a considerable distance from it,) at a height of 22 feet from the ground, and there was placed side by side with it, for comparison, a small portable anemometer on Dr. Robinson's principle, designed by Professor C. P. Smyth. Near the end of the year 1857 a small building was erected on the top of the tower, at an elevation of 110 feet above the ground, and by placing there another of Professor Smyth's instruments and comparing its indications with those of the one below, Mr. Johnson found that, on the average, throughout the year 1858, the velocity at the top of the tower was greater than that at the lower station, in the proportion of 2·26 : 1. (*Rad. Obs.* vol. xviii. p. [xxiii].) The anemograph was kept in its old position till August 9, 1858, when it was taken down, and, after some alterations had been made by Mr. Adie, it was placed in its present position on the top of the tower.

For the verification of the ratio given above by means of the observations which were made in 1858, and for the value of the scale of the anemograph, the Introduction to the *Meteorological Observations* for 1858 may be consulted.

On March 17 the anemograph was taken down to be cleaned and repaired. On August 22 the parts of the vane or direction-apparatus were taken to pieces and cleaned. On September 15 the clock giving motion to the box containing the photographic paper was taken away to be cleaned, and was returned on September 19.

The indications of the Smyth-Robinson anemometers were read daily at 10^h A. M. throughout the year.

There is also on the tower an *Hyetograph*, or *Self-registering Pluviometer* (described in vol. xvii. p. [xviii]), but its action was found to be imperfect, and no continuous records of it exist. In February and March 1862 attempts were made to improve its action. Since that time, however, it has been rarely used except in the case of one or two great storms of rain.

The last instrument to be mentioned is an *Electrograph*, mounted by Mr. Adie, consisting chiefly of a long copper rod, which, up to 1861, terminated in a sharp spike pointing upwards above the tower. It gives its indications photographically by connexion with a straw *Electrometer*. As the indications of electricity by this instrument had been very unsatisfactory, the single spike was replaced by a bunch of copper points on July 10, 1861; and since that time the indications have been much more abundant.

Daily Results of Meteorological Observations.

The Tables under this title are intended to give as complete a summary of the mean daily elements of the weather as the size of the page will allow.

The indications of the barometer and thermometers, in the 2nd, 3rd, and 4th columns of the Table, are the means of the twelve daily readings of the meteorographic registers; that is, they represent the means of the two-hourly indications, from noon of one day to noon of the next. When the registers are imperfect the means of the recorded readings are reduced to the mean for the day, by the application of the corrections for the horary changes which are given in vol. xviii, as deduced from three years' observations.

The highest and lowest temperatures in the shade, in the sun, and on grass, were observed with the self-registering instruments previously mentioned. The corrections due to the want of coincidence of the readings with the standard have been applied to their readings wherever they are necessary.

The record of rain is that given by the gauge on the ground, which is examined every day at 10^h A.M.

The amounts of the horizontal motion of the wind are deduced from the observations made with the small anemometer of Professor Smyth's construction on the top of the tower, on the assumption that the readings of the instrument are to be divided by 56 to give the corresponding motion of the air in miles. (See Introduction to *Meteorological Observations* for 1858, page [7].) The directions of the wind are deduced from the twelve daily readings of the anemograph. The mean directions are derived from the means of the numbers under the different hours for each month in Table XII, following the *Daily Results* and *Characteristics of the Weather.* At times when the anemograph has failed, the estimation of direction is the mean of the three estimations made by the eye at 2^h, 10^h, and 22^h.

The amount of cloud is estimated as usual from 0 to 10; 0 representing a cloudless sky, and 10 a perfectly overcast sky.

In cases of a double description of weather, the first applies from noon to midnight, the second from midnight to noon.

The principal elements for determining the general character of the weather for each month, together with remarkable meteoric phenomena, are given at the end of the *Daily Results.* The phases of the Moon are given at the foot of each page of the *Daily Results.*

Diurnal Inequalities of Mean Monthly Meteorological Elements, derived from the Two-hourly Indications of the Photographic Instruments, 1864.

These results are precisely similar to those given by Mr. Johnson in 1857, excepting that as, for economy of printing, the actual Meteorographic registers of bi-hourly results are not given in this volume, it was necessary to give for the barometer and the dry and wet thermometers the mean monthly indications for every two hours. These results form Tables I, IV, and VII.

Tables II, V, and VIII give the constants arising from the solution of Bessel's interpolation equations, for expressing in the usual periodical formulæ the readings of the barometer, thermometers, &c. at any hour of the day, reckoned from noon, in terms of the mean value and the hour of the day. In the case of twelve values of a function observed at equal intervals of time, the solution is the following:

If $\beta_x = \beta + a \text{ Sin } (x + A) + b \text{ Sin } (2x + B) + c \text{ Sin } (3x + C) + \text{\&c.}$, (where x is the hour expressed in degrees,) and if o, i, ii, iii,......x, xi, represent the values of the function corresponding to values of x, 0°, 30°, 60°,......300°, 330°, then we shall find that the application of the method of least squares leads to the following determination of the values of the constants a, A, b, B, c, C, &c.:

$$\beta = \frac{1}{12}(\text{o}+\text{i}+\text{ii}+\ldots\ldots+\text{x}+\text{xi}),$$

$$\begin{aligned}
6a \text{ Sin } A &= \text{o}-\text{vi}+(\text{i}-\text{v}+\text{xi}-\text{vii}) \text{ Sin } 60° + (\text{ii}-\text{iv}+\text{x}-\text{viii}) \text{ Sin } 30°,\\
6a \text{ Cos } A &= \text{iii}-\text{ix}+(\text{ii}-\text{x}+\text{iv}-\text{viii}) \text{ Sin } 60° + (\text{i}-\text{xi}+\text{v}-\text{vii}) \text{ Sin } 30°,\\
6b \text{ Sin } B &= \text{o}-\text{iii}+\text{vi}-\text{ix}+(\text{i}-\text{ii}+\text{v}-\text{iv}+\text{vii}-\text{viii}+\text{xi}-\text{x}) \text{ Sin } 30°,\\
6b \text{ Cos } B &= (\text{i}-\text{iv}+\text{ii}-\text{v}+\text{vii}-\text{x}+\text{viii}-\text{xi}) \text{ Sin } 60°,\\
6c \text{ Sin } C &= \text{o}-\text{ii}+\text{iv}-\text{vi}+\text{viii}-\text{x},\\
6c \text{ Cos } C &= \text{i}-\text{iii}+\text{v}-\text{vii}+\text{ix}-\text{xi}.
\end{aligned}$$

The values of the constants being thus obtained for the barographic, thermographic, and hygrographic results, Tables III, VI, and IX are formed by means of them, by substituting for x in the general formula the hourly values, namely 0°, 15°, 30°,......330°, 345°, and thus the hourly values of the diurnal inequalities, or the excesses of the hourly values above the means for the day, are obtained.

Table X, giving the mean monthly elasticity of vapour for every two hours of the day, is deduced by means of Mr. Glaisher's Tables from the two-hourly values of the temperature of the air and the temperature of evaporation, and the mean values of these quantities are formulated as in the preceding instances. Table XI, giving the mean monthly values of the pressure of dry air for every two hours, is derived from Table X by subtracting the numbers in that Table from the corresponding numbers in Table I. It may be observed, however, that the correctness of this process has been recently disputed by Dr. Lamont.

Results for the Direction and Velocity of the Wind; Amount of Rain collected in each Month, and Distribution under different Winds; Quantity of Ozone, &c., &c.

Table XII is formed in the following manner:

Suppose the wind to have blown with a velocity V, represented in its statical effects by a pressure P, computed by the equation $P = \frac{V^2}{200}$

(the velocities being those recorded in the Photographic Register, and read for every two hours for each day of every month); and let the frequency with which it has blown from any one direction making an angle a with the meridian towards the North at any hour be denoted by n. Then nP may be considered to be the whole force of this wind during the month, and may be resolved into its components nP Cos a and nP Sin a in the direction of the meridian and at right angles to it, being considered positive towards the North and East. The sums of the forces of all the winds for the month at this particular hour, resolved in the directions of the cardinal points, will be, therefore, Σ (nP Cos a) and Σ (nP Sin a); and if we suppose that these are the components of a single force R, making an angle θ with the meridian, which would produce the same effect if all were blowing at the same instant of time, we shall have

$$R \operatorname{Cos} \theta = \Sigma (nP \operatorname{Cos} a) = A, \text{ suppose,}$$
$$\text{and } R \operatorname{Sin} \theta = \Sigma (nP \operatorname{Sin} a) = B, \quad ,,$$

and therefore $\operatorname{Tan} \theta = \frac{B}{A}$, and $R = A \operatorname{Sec} \theta$; and the mean representative of the pressure of the wind at any hour will be $\frac{A \operatorname{Sec} \theta}{\Sigma n}$ blowing in the direction θ; and the mean representative of the velocity for that hour will be deduced from the equation $V = \sqrt{200 P}$. The values of θ, expressed in degrees, are given in Table XII; and the values of the representatives of the bi-horary velocities for the different hours of each month are given in Table XIII.

Table XIV gives the actual mean velocities for the bi-horary intervals in each month, together with the means for the year, and the interpolation equation representing the mean yearly result for any hour of the day.

The equation for relative velocities is preferable to that giving absolute velocities, as the value of the scale of velocities seems still uncertain.

Table XV gives the general changes of the wind for the year, and it has been formed with great facility from the two-hourly registers of direction on the anemographic sheets by noting the time when conspicuous changes have occurred from direct to retrograde, or the contrary, and then finding what have been the whole changes during those intervals of time in which the wind has been turning on the whole in one direction, retrograde or direct. The Table gives the monthly amounts of changes in both directions and the whole annual change.

Table XVI, giving the relations of pressure and temperature of the air under different winds, is formed precisely in the same manner as in preceding years. Thus, all the elements being taken from the *Daily Results of Observation*, they have been grouped so as to reduce the whole number of directions to eight, by combining the

number of days under the principal point with those under the points immediately preceding and following, allotting to each a weight proportional to the number of observations. Under the North point are included therefore the barometer and thermometer readings, corresponding to North, N.N.W., and N.N.E., and so on for all the rest. The separate columns of the Table require little explanation, excepting that the numbers in column 6 are taken from the first Table on p. [xxvii] of the volume for 1857, and those in column 8 from the Table on p. [83] of the same volume, by subtracting the normal temperatures given in that Table from 48°·6, the normal mean annual temperature.

Table XVII gives the amount of rain collected in the four gauges, one placed on the ground, and the others at elevations of 22, 24, and 112 feet respectively. (See p. [2].)

Table XVIII, which gives the relations of the quantities of rain which fell during the year 1864 under different winds, has been formed on precisely the same principles as those applied in Table XVI, namely, by forming groups for each principal point, including the half-points immediately preceding and following, and taking the corresponding quantities of rain-fall from the *Daily Results*. The observations of a single year necessarily give a very imperfect result, but the combination of several years will give results of considerable importance, so as to make it desirable to continue the calculations from year to year.

Table XIX gives the indications of Schönbein's Ozonometer during the year, applying numerically his scale of colours in the usual way.

Table XX (reprinted from the preceding volume) gives the mean of the ozone-indications for each month in the ten years 1856–1865.

It will be seen from this Table, that, in conformity with the results deduced by Dr. T. Bœckel (*Les Mondes* for Dec. 21, 1865, vol. ix. p. 692), there is much more ozone in the Spring than at any other season of the year, and that the maximum is arrived at in May; that there is least ozone in October and November; and, finally, that on the average there is generally less ozone in the evening than in the morning.

ROBERT MAIN.

April 4, 1867.

DAILY RESULTS

OF

METEOROLOGICAL OBSERVATIONS

MADE AT THE

RADCLIFFE OBSERVATORY, OXFORD,

IN THE YEAR

1864.

JANUARY, 1864.

Day.	Mean Barom. reduced to 32°.	Mean Temperature. Air.	Mean Temperature. Evap.	Self-Registering Thermometers. Shade. Max.	Shade. Min.	Sun. Max.	Grass. Min.	Wind. Direction.	Wind. Horizontal Motion.	Amount of Cloud.	Rain.	Weather.
	Inches.	°	°	°	°	°	°		Miles.		Inches.	
1	30·079	28·5	27·3	34·4	22·7	45·0	16·0	N N E	317	3	...	Fine till 20^h.
2	30·379	26·9	26·9	32·9	20·7	45·0	16·0	N N E	112	3	...	Fine till 15^h.
3	30·426	25·1	25·0	31·9	18·9	43·0	16·0	N E	234	0	...	Fine.
4	30·269	25·0	25·0	28·7	21·7	32·0	17·0	N N E	267	6	...	Fine till 8^h.
5	30·073	22·0	22·0	29·1	13·2	42·8	12·0	N by E	161	3	...	Fine.
6	30·064	19·6	19·6	25·1	12·7	33·5	10·5	N	6	4	...	Fine. Cloudy.
7	29·940	26·9	26·9	28·4	20·2	40·8	15·5	N	284	8	...	Overcast after 6^h
8	29·755	27·3	27·3	32·4	18·7	37·0	15·0	N	7	8	...	Cloudy. Fog.
9	29·725	38·2	37·6	39·9	30·7	39·0	32·0	E S E	158	10	0·05	Foggy. Rainy.
10	29·878	41·0	40·2	42·4	38·7	44·3	36·5	S E	128	10	0·04	Foggy. Rainy.
11	29·864	42·3	41·2	44·9	39·7	43·0	38·5	S E	313	10	...	Foggy.
12	30·035	38·7	38·4	41·7	33·2	40·3	33·0	Var.	93	10	0·11	Rainy. Foggy.
13	30·118	36·5	36·5	37·3	34·8	36·0	35·5	N by E	85	10	0·04	Rainy. Foggy.
14	30·074	35·1	34·9	36·4	34·7	36·5	34·0	E N E	17	10	0·01	Foggy.
15	30·066	38·0	37·4	39·9	35·7	38·2	36·0	S E	235	10	...	Foggy.
16	29·876	35·7	34·5	39·9	31·8	39·0	29·0	E S E	274	10	0·10	Rain after 20^h.
17	29·808	39·6	39·6	41·9	35·7	40·2	35·5	S E	62	10	0·03	Thick fog.
18	29·941	42·6	42·4	44·2	36·0	45·2	32·5	S S E	131	10	0·03	Thick fog.
19	30·014	46·7	46·5	47·9	41·5	50·8	41·0	S by E	234	10	0·19	Rainy.
20	29·869	46·1	44·7	48·9	40·7	47·0	39·0	S	401	10	0·12	Rain 14^h-17^h.
21	29·674	47·7	46·1	50·9	41·7	56·0	38·0	S	469	9	0·01	Fine. Stormy.
22	29·545	51·7	49·8	53·7	46·2	52·2	44·0	S by W	604	10	0·03	Stormy.
23	29·767	42·6	40·9	48·9	33·7	55·0	30·0	W S W	181	7	0·15	Rainy, 4^h-12^h.
24	30·155	41·4	39·6	44·9	36·0	58·1	32·5	S W	347	4	...	Fine.
25	30·186	42·0	40·4	47·6	37·3	51·8	34·0	S	189	7	...	Fair.
26	29·888	44·6	43·3	47·9	39·7	57·0	37·5	S by E	329	6	0·07	Rain about 15^h.
27	29·758	46·3	43·9	50·9	38·7	60·0	33·5	S W	538	7	...	Overcast till 19^h.
28	29·948	42·3	39·4	47·9	36·2	57·0	32·0	N W	354	8	...	Cloudy.
29	30·265	31·8	29·7	38·1	26·5	54·1	22·0	E S E	175	4	...	Fine.
30	30·187	33·9	32·3	36·9	29·7	49·0	24·0	S S E	194	4	...	Fine. Thin fog.
31	30·040	36·9	35·0	43·1	31·5	53·0	24·0	S S E	163	6	...	Fine.
Mean or Sum.	29·989	36·9	35·9	40·6	31·6	45·9	28·8	S 3 E	7062	7	0·98	

The corrections $-0°·1$ and $+0°·7$ have been applied to the readings of the self-registering max. and min. air-thermometers, to reduce them to the readings of the standards.

MOON'S PHASES, &c.

	d.	h.		d.	h.
Last Quarter	1	20	Full	23	10
New	8	20	Apogee	24	9
Perigee	9	14	Last Quarter	31	12
First Quarter	15	11			

FEBRUARY, 1864.

Day.	Mean Barom. reduced to 32°.	Mean Temperature. Air.	Mean Temperature. Evap.	Self-Registering Thermometers. Shade. Max.	Shade. Min.	Sun. Max.	Grass. Min.	Wind. Direction.	Wind. Horizontal Motion.	Amount of Cloud.	Rain.	Weather.
	Inches.	°	°	°	°	°	°		Miles.		Inches.	
1	29·940	46·4	44·6	49·2	41·7	54·2	40·0	S	476	10	...	Overcast.
2	29·848	49·7	47·0	50·8	46·7	49·3	44·5	S by W	548	10	...	Drizzle at 21h.
3	29·879	38·0	36·3	48·8	30·8	53·8	26·0	S W	374	6	0·04	Showery, 6h-9h.
4	30·071	33·9	31·7	40·9	28·7	50·0	24·0	W N W	354	4	...	Light snow, 11h.
5	30·074	33·2	32·6	36·7	29·7	45·0	28·0	N W	441	5	...	Fine, with cloud.
6	29·872	30·2	29·6	35·8	24·7	46·5	21·0	N N W	191	8	...	Lt. snow at night.
7	29·676	28·7	28·7	31·8	27·7	46·2	23·0	N N W	157	10	...	Overcast.
8	29·504	27·4	27·4	34·6	19·0	44·2	15·0	N W	89	2	...	Fine after 9h.
9	29·335	27·0	26·8	35·8	17·7	45·2	14·0	W N W	} 146	0	...	Fine.
10	29·417	33·6	32·5	38·8	25·7	56·3	28·0	N N W		7	...	Snowshowers.
11	29·487	36·4	34·8	43·8	32·7	42·5	32·0	S S W	325	10	0·46	Snow after 10h.
12	29·378	49·7	48·5	53·0	43·8	55·0	40·5	S S W	553	10	0·02	Rain about 19h.
13	29·906	44·3	41·6	56·1	36·7	60·0	33·0	S S W	501	6	...	Fine after 6h.
14	29·898	46·1	44·0	50·8	41·7	62·1	40·5	S	362	9	...	Overcast after 6h
15	29·605	49·5	47·8	54·7	43·7	63·0	43·5	S S W	506	9	0·05	Rain at 19h.
16	29·625	38·7	36·5	48·8	33·2	62·0	31·0	W by S	359	4	0·19	Rain at 12h.
17	29·963	35·0	32·6	43·4	28·6	54·0	24·0	N W	285	5	...	Fine, 4h-19h.
18	30·132	32·2	30·6	39·0	28·0	56·1	25·0	N N E	328	9	...	Cloudy.
19	30·018	27·3	27·2	32·8	24·8	47·0	24·0	N N E	407	9	...	Snow at 7h 30m.
20	29·665	27·9	27·7	30·8	26·7	36·6	26·5	N N E	309	10	...	Snowshowers.
21	29·551	30·0	29·9	32·8	28·7	34·0	27·0	N	173	10	0·02	Snowshowers.
22	29·718	32·1	31·5	35·8	28·7	45·8	26·5	N by W	62	9	...	Overcast.
23	29·778	29·4	28·7	36·8	23·5	51·8	18·5	N N E	239	6	...	Fine till 15h.
24	29·777	34·3	33·0	38·0	30·5	46·5	32·0	N N E	351	10	0·01	Lt. snow 8h-20h.
25	29·784	35·4	34·1	37·8	34·2	37·0	34·0	N N E	281	10	...	Overcast.
26	29·691	36·1	35·5	37·8	34·7	37·0	35·0	N N E	236	10	0·02	Rain at 20h.
27	29·483	39·4	39·2	42·3	35·7	40·8	37·0	E S E	139	10	0·40	Rainy.
28	29·437	43·4	42·1	48·4	39·9	65·2	36·0	S E	95	9	0·22	Rainy after 12h.
29	29·497	41·8	40·8	48·6	37·7	47·0	35·0	S E	159	7	0·02	Rain at night.
Mean or Sum.	29·724	36·5	35·3	41·9	31·9	49·5	29·8	S 33 W	8446	8	1·45	

The corrections $-0°{\cdot}2$ and $+0°{\cdot}7$ have been applied to the readings of the self-registering max. and min. air-thermometers, to reduce them to the readings of the standards.

MOON'S PHASES, &c.

	d.	h.		d.	h.
Perigee	7	3	Apogee	20	9
New	7	6	Full	22	5
First Quarter	14	1			

MARCH, 1864.

Day.	Mean Barom. reduced to 32°.	Mean Temperature.		Self-Registering Thermometers.				Wind.		Amount of Cloud.	Rain.	Weather.
		Air.	Evap.	Shade. Max.	Shade. Min.	Sun. Max.	Grass. Min.	Direction.	Horizontal Motion.			
	Inches.	°	°	°	°	°	°		Miles.		Inches.	
1	29·637	38·1	37·4	47·8	29·3	48·0	28·0	E S E	132	7	0·02	Fine, 5^h-12^h.
2	29·576	38·9	38·3	46·0	36·0	51·0	32·0	N N E	205	10	...	Overcast.
3	29·353	41·5	41·3	49·8	36·7	50·0	37·0	E by N	194	10	0·39	Rainy. Fog.
4	29·296	46·2	45·3	56·6	36·2	67·2	32·0	E S E	184	6	...	Fine, 5^h-11^h.
5	29·047	44·2	43·7	50·0	39·7	55·0	39·0	E N E	264	10	0·75	Rain after 8^h.
6	28·810	47·7	45·2	51·8	41·7	53·0	41·0	S	479	8	0·22	Very showery.
7	28·912	42·6	41·0	49·8	39·6	59·5	34·0	S S E	438	9	0·04	Showers after 18^h
8	29·007	34·2	34·2	39·8	33·0	39·0	30·0	N N E	422	10	0·31	Showers. Snow.
9	29·231	31·7	31·5	36·1	24·7	43·0	23·0	W	259	10	0·29	Snow till 4^h.
10	29·406	42·9	40·8	47·9	35·5	57·3	36·0	S by W	492	9	0·01	Showers.
11	29·571	42·1	39·4	49·8	35·7	62·5	32·0	S W	656	2	...	Fine.
12	30·017	42·8	40·3	48·8	37·2	61·0	33·0	S W	438	5	...	Fine. Cloudy.
13	29·898	47·6	44·8	51·5	45·7	64·5	42·0	S W	536	8	...	Cloudy.
14	29·708	49·1	45·8	54·4	45·7	66·0	43·0	S S W	936	10	...	Overcast.
15	29·768	40·3	38·7	52·8	32·7	58·0	26·0	N W	206	7	0·11	Rain, 3^h-11^h.
16	29·960	39·9	36·1	46·8	33·9	65·0	30·5	E S E	209	5	...	Generally fine.
17	29·763	37·6	34·5	48·6	27·7	62·0	20·0	E N E	167	3	...	Fine.
18	29·498	38·3	35·1	48·8	29·7	68·3	26·0	N N E	191	3	...	Fine.
19	29·430	47·3	43·3	60·8	31·3	76·0	29·5	N N E	187	2	...	Fine.
20	29·442	45·1	42·4	58·9	35·7	72·5	35·0	N E	583	4	...	Fine till 10^h.
21	29·480	40·7	37·9	45·6	35·7	54·3	33·0	N	218	10	...	Overcast.
22	29·595	38·7	37·0	43·8	35·8	52·5	37·0	N	486	9	...	Overcast.
23	29·805	36·6	33·6	47·8	24·7	63·5	20·0	N by W	204	2	...	Fine.
24	29·672	38·0	34·5	50·5	24·7	68·0	19·0	E N E	56	2	...	Fine. Fog.
25	29·404	44·0	40·1	54·8	34·7	74·1	33·0	W S W	224	7	...	Fine till 7^h.
26	29·415	35·3	34·0	42·0	31·7	49·0	28·5	N W	287	7	0·02	Lt. rain & snow.
27	29·335	40·8	37·0	46·8	36·8	58·0	35·0	N by W	304	10	...	Overcast.
28	29·016	39·2	36·0	47·0	33·8	50·1	30·0	N W	562	6	0·10	Stormy.
29	29·293	40·1	37·5	47·3	32·7	53·0	28·5	W S W	355	6	0·15	Showers. Snow.
30	29·520	41·6	39·0	49·8	32·5	54·8	28·5	S W	293	7	...	Fine, 7^h-20^h.
31	29·455	45·7	43·0	52·3	38·2	60·0	34·0	S	523	8	0·06	Showers.
Mean or Sum.	29·462	41·3	39·0	49·2	34·5	58·6	31·5	S 35 W	10690	7	2·47	

The corrections $-0°{\cdot}2$ and $+0°{\cdot}7$ have been applied to the readings of the self-registering max. and min. air-thermometers, to reduce them to the readings of the standards.

MOON'S PHASES, &c.

	d.	h.		d.	h.
Last Quarter............	1	1	Apogee................	18	20
Perigee................	6	14	Full..................	22	22
New....................	7	16	Last Quarter...........	30	10
First Quarter	14	18			

APRIL, 1864.

Day.	Mean Barom. reduced to 32°.	Mean Temperature. Air.	Mean Temperature. Evap.	Self-Registering Thermometers. Shade. Max.	Shade. Min.	Sun. Max.	Grass. Min.	Wind. Direction.	Wind. Horizontal Motion.	Amount of Cloud.	Rain.	Weather.
	Inches.	°	°	°	°	°	°		Miles.		Inches.	
1	29·574	38·8	35·7	49·6	32·7	65·0	29·0	S S W	512	5	...	Variable.
2	29·781	42·8	40·1	51·6	37·5	61·5	32·5	S S W	312	7	...	Fine till 10h.
3	29·643	50·2	49·4	57·6	44·7	59·0	42·5	S by W	278	10	0·12	Light showers.
4	29·859	47·7	46·4	62·1	36·2	75·0	38·0	N by W	227	10	0·36	Rain after 7h.
5	30·056	35·8	35·5	41·7	35·2	40·0	34·0	E by N	139	10	0·48	Rainy.
6	30·043	43·0	42·3	46·4	41·0	46·5	40·5	S E	335	10	0·01	Drizzle.
7	30·133	44·9	42·2	51·6	40·8	51·1	40·0	S E	194	10	...	Overcast.
8	30·134	46·2	43·1	54·6	42·7	58·2	42·0	S S E	137	10	0·01	Drizzle.
9	30·022	52·3	51·3	56·6	44·8	59·0	44·0	W	69	10	...	Overcast. Fog.
10	29·934	54·1	52·3	59·1	49·5	70·0	45·0	S W	113	10	...	Overcast.
11	29·884	50·2	45·8	62·7	39·7	74·8	36·0	W by N	175	6	...	Fine till 9h.
12	29·890	45·1	40·6	55·7	33·7	75·0	28·0	N	137	3	...	Fine.
13	29·802	45·2	40·7	56·5	32·7	70·8	25·0	N E	211	2	...	Fine.
14	29·573	47·7	44·5	59·6	34·7	76·0	28·5	E	183	4	...	Fine.
15	29·532	50·2	47·6	64·6	45·0	77·5	44·0	W	252	10	0·09	Rain after 21h.
16	29·629	44·1	42·4	49·2	43·4	51·0	42·0	W N W	431	10	0·56	Rain till 8h.
17	29·842	47·0	43·1	57·2	37·7	72·3	33·0	W S W	271	4	...	Fine.
18	29·855	48·5	45·2	60·4	35·7	77·5	30·5	S S E	255	3	...	Fine after 8h.
19	29·733	54·0	48·0	63·6	42·6	77·0	38·5	S E	312	1	...	Fine.
20	29·751	58·4	51·0	70·4	45·2	82·6	37·5	S E	284	5	...	Fine.
21	29·894	51·3	45·3	67·6	36·7	82·5	31·0	N N E	249	2	...	Fine.
22	30·014	50·0	45·6	63·6	34·7	84·0	28·0	N N E	123	0	...	Fine.
23	30·032	49·7	48·5	64·6	37·2	86·2	34·5	N N E	195	3	...	Fine. Fog.
24	30·020	45·2	45·3	56·6	35·7	72·4	30·0	N by E	339	3	...	Fine.
25	29·941	48·6	48·1	58·6	40·7	76·0	37·0	N by E		6	...	Fine till 12h.
26	29·982	47·6	44·6	55·6	43·7	58·1	43·5	N by E	304	10	...	Overcast.
27	29·978	46·3	43·9	55·7	42·1	64·3	43·0	N	300	10	...	Overcast.
28	29·950	44·7	42·2	51·2	39·7	68·1	33·0	N N W	152	9	...	Cloudy.
29	29·924	51·5	47·2	62·6	43·2	79·0	37·5	E S E	282	3	...	Fine till 12h.
30	29·983	49·6	45·3	57·6	42·7	70·0	37·0	W N W	132	8	...	Cloudy.
Mean or Sum.	29·880	47·7	44·8	57·5	39·7	68·8	36·1	W 20 N	6903	6	1·63	

The corrections $-1°{\cdot}0$ and $-0°{\cdot}7$ have been applied to the mean readings of the thermograph and hygrograph; and $-0°{\cdot}4$ and $+0°{\cdot}7$ to the readings of the self-registering max. and min. air-thermometers, to reduce them to the readings of the standards.

MOON'S PHASES, &c.

	d.	h.		d.	h.
Perigee	3	18	Full	21	13
New	6	2	Last Quarter............	28	17
First Quarter	13	12	Perigee	30	23
Apogee	15	14			

MAY, 1864.

Day.	Mean Barom. reduced to 32°.	Mean Temperature.		Self-Registering Thermometers.				Wind.		Amount of Cloud.	Rain.	Weather.
		Air.	Evap.	Shade. Max.	Shade. Min.	Sun. Max.	Grass. Min.	Direction.	Horizontal Motion.			
	Inches.	°	°	°	°	°	°		Miles.		Inches.	
1	29.792	55.2	52.2	62.5	51.9	77.5	47.0	S S W	366	10	0.10	Rain, 8^h-12^h.
2	29.579	57.0	54.3	64.2	52.9	66.3	50.0	S W	400	10	0.13	Rain, 5^h-13^h.
3	29.668	52.4	50.4	63.8	48.6	70.5	45.0	N N E	238	9	0.36	Rain after 12^h.
4	29.673	50.5	49.8	56.5	47.7	61.0	46.0	S E	217	10	0.19	Rainy till 12^h.
5	29.756	50.9	49.5	58.4	44.9	67.0	40.0	S E	217	7	0.28	Rainy till 6^h.
6	29.641	53.9	51.2	64.3	45.7	70.0	39.0	S S W	243	8	0.46	Rain, 9^h-13^h.
7	29.626	50.5	47.3	60.4	38.7	77.1	30.0	N	128	6	...	Fine till 13^h.
8	29.472	48.4	45.8	55.4	44.2	58.0	40.0	N by E	362	10	0.10	Rainy after 8^h.
9	29.634	48.2	45.4	55.4	44.7	70.0	40.0	N N W	249	10	0.10	Rainy before 8^h.
10	29.737	51.1	47.8	59.4	47.6	73.8	43.0	N	316	10	...	Overcast.
11	29.648	52.7	51.0	61.3	49.7	73.0	44.5	N N E	309	10	0.01	Light showers.
12	29.745	54.7	51.3	65.3	45.7	75.8	38.0	N N W	222	10	...	Overcast.
13	29.948	56.0	51.8	67.4	44.3	82.3	35.0	N N W	83	7	...	Hazy.
14	29.969	63.0	59.1	74.2	53.7	88.4	47.0	S W	163	7	...	Fine.
15	29.965	64.7	60.7	75.4	50.7	96.0	43.5	S S W	69	2	...	Fine.
16	30.002	61.9	56.9	74.4	47.7	92.5	43.0	E	138	0	...	Fine.
17	30.037	66.2	59.6	77.7	49.7	95.5	46.0	S E	66	2	...	Fine.
18	30.033	68.4	62.7	80.4	54.0	98.6	49.5	E by S	42	5	...	Fine. Haze.
19	29.994	67.8	62.4	81.5	54.2	101.5	51.5	E N E	131	6	...	Thunderclouds.
20	29.818	60.8	55.0	78.1	49.6	91.0	44.0	W S W	351	6	0.16	Thunderstorm.
21	29.983	57.8	52.8	64.4	54.5	73.1	52.0	W	223	10	...	Overcast.
22	29.823	57.7	52.4	69.0	48.2	78.1	42.5	W by N	291	5	...	Cloudy.
23	29.995	49.3	46.7	59.9	38.6	72.0	31.0	N N E	183	8	...	Overcast till 11^h.
24	29.983	50.3	47.6	60.8	39.7	71.8	33.5	E	151	2	...	Fine.
25	29.774	52.0	47.6	63.9	43.2	72.5	37.0	N W	201	9	...	Cloudy.
26	29.884	47.4	43.5	55.5	34.7	72.0	26.5	N N W	179	4	...	Fine after 9^h.
27	29.813	52.9	47.3	63.9	45.2	76.0	41.0	W N W	203	4	...	Fair.
28	29.738	52.8	47.9	64.2	42.5	79.0	40.0	W by N	174	8	...	Fine night.
29	29.810	45.6	43.5	56.0	32.7	66.0	26.0	E N E	138	7	...	Fine night.
30	29.605	50.6	46.4	61.2	43.5	70.0	37.0	S	189	7	0.05	Fine, 7^h-11^h.
31	29.576	45.5	43.6	51.5	42.7	70.8	41.5	N N W	213	9	0.22	Rain till 6^h.
Mean or Sum.	29.797	54.7	51.1	64.7	46.2	77.0	41.0	W 22 N	6455	7	2.16	

The corrections $-0°.5$ and $-0°.3$ have been applied to the mean readings of the thermograph and hygrograph; and $-0°.6$ and $+0°.7$ to the readings of the self-registering max. and min. air-thermometers, to reduce them to the readings of the standards.

MOON'S PHASES, &c.

	d.	h.		d.	h.
New	5	12	Full	21	1
First Quarter	13	6	Perigee	26	0
Apogee	13	9	Last Quarter	27	21

JUNE, 1864.

Day.	Mean Barom. reduced to 32°.	Mean Temperature. Air.	Mean Temperature. Evap.	Self-Registering Thermometers. Shade. Max.	Self-Registering Thermometers. Shade. Min.	Self-Registering Thermometers. Sun. Max.	Self-Registering Thermometers. Grass. Min.	Wind. Direction.	Wind. Horizontal Motion.	Amount of Cloud.	Rain.	Weather.
	Inches.	°	°	°	°	°	°		Miles.		Inches.	
1	29·561	50·7	46·8	61·9	40·4	81·0	33·0	N	99	4	...	Fair.
2	29·634	54·4	49·4	64·1	47·5	81·0	44·5	N N E	145	9	...	Overcast after 4h
3	29·694	49·5	48·0	59·2	37·4	75·0	30·0	N	158	3	...	Fine after 4h.
4	29·745	56·4	52·1	65·3	44·6	81·3	37·0	S S W	156	8	...	Cloudy.
5	29·702	57·9	53·9	67·1	51·4	82·0	45·0	S S W	383	9	...	Cloudy.
6	29·811	60·4	55·6	72·2	49·8	88·1	46·0	S by W	179	4	...	Fine. Fog.
7	29·763	63·3	59·4	73·6	56·4	88·9	51·5	S W	165	5	...	Fine.
8	29·647	60·3	55·1	71·2	47·4	88·0	42·5	S	158	5	...	Fine.
9	29·634	54·2	53·0	69·3	44·5	79·8	42·0	S W	179	7	0·15	Rain, 1h-4h.
10	29·679	59·1	53·0	70·1	51·9	86·0	49·0	S by E	274	7	...	Fair.
11	29·593	56·9	52·1	67·1	48·4	79·0	44·0	S S E	377	7	0·05	Cloudy.
12	29·545	57·3	53·0	69·2	46·6	78·0	39·5	S S E	348	8	...	Cloudy.
13	29·422	56·9	52·5	70·3	47·3	84·4	42·5	S S E	277	6	0·02	Fine till 14h.
14	29·313	56·1	53·0	67·1	50·4	72·0	44·0	S S E	411	8	0·08	Rain, 4h-9h.
15	29·541	55·1	50·6	65·1	46·4	80·0	40·5	S S W	216	3	0·02	Fine after 8h.
16	29·827	61·0	57·4	68·2	52·3	84·0	45·0	S S W	288	7	...	Fine till 12h.
17	29·840	61·5	58·5	68·6	57·4	72·2	52·5	S by W	346	8	0·23	Rain, 15h-18h.
18	29·972	57·5	53·7	69·1	49·4	80·2	43·0	S S W	411	9	...	Overcast.
19	30·064	57·5	53·5	66·7	47·7	76·0	39·0	S S W	274	5	...	Fine night.
20	29·932	60·9	55·9	72·2	56·9	87·0	53·0	S by W	379	7	...	Cloudy.
21	29·938	58·7	53·7	68·1	52·4	80·0	46·0	S S W	436	6	...	Cloudy.
22	29·817	57·9	54·5	68·1	51·4	79·0	50·0	S by W	389	10	0·32	Showery.
23	29·855	55·5	51·0	65·7	45·2	77·0	41·0	S W	426	8	0·05	Fine, 13h-19h.
24	29·920	57·8	54·9	64·6	53·6	73·0	51·5	S S W	415	10	...	Light showers.
25	29·789	60·8	58·0	67·2	56·4	70·0	54·0	S W	249	8	0·04	Overcast till 19h.
26	29·827	55·5	50·5	68·6	45·3	79·0	41·5	W N W	363	5	...	Fine night.
27	29·974	56·6	52·0	64·1	48·4	70·0	44·5	W by S	197	10	...	Overcast.
28	29·875	58·8	56·8	67·1	53·9	75·0	49·0	S W	219	10	0·04	Rain, 1h-9h.
29	29·730	59·4	55·1	69·2	57·0	76·0	51·5	S W	319	9	0·01	Overcast.
30	29·748	57·1	49·3	66·1	48·5	72·4	43·5	W S W	295	9	...	Cloudy.
Mean or Sum.	29·746	57·5	53·4	67·5	49·5	79·1	44·5	S 22 W	8531	7	1·01	

The corrections $-0°{\cdot}7$ and $+0°{\cdot}6$ have been applied to the mean readings of the thermograph and hygrograph up to the 28th; and $-0°{\cdot}9$ and $+0°{\cdot}4$ to the readings of the self-registering max. and min. air-thermometers, to reduce them to the readings of the standards.

MOON'S PHASES, &c.

	d.	h.		d.	h.
New	3	24	Full	19	11
Apogee	10	3	Perigee	22	1
First Quarter	11	24	Last Quarter	26	2

JULY, 1864.

Day.	Mean Barom. reduced to 32°.	Mean Temperature. Air.	Evap.	Self-Registering Thermometers. Shade. Max.	Shade. Min.	Sun. Max.	Grass. Min.	Wind. Direction.	Horizontal Motion.	Amount of Cloud.	Rain.	Weather.
	Inches.	°	°	°	°	°	°		Miles.		Inches.	
1	29·725	57·8	52·5	65·0	52·6	72·2	48·0	S S W	236	10	...	Overcast.
2	29·427	57·0	53·2	70·1	50·4	80·1	44·0	S by W	439	6	0·21	Showers till 9^h.
3	29·670	53·5	49·4	60·1	43·5	75·0	35·5	W S W	266	5	0·02	Cloudy.
4	29·834	56·5	51·4	66·1	46·5	79·0	40·0	S W	310	3	...	Fine after 9^h.
5	29·907	57·2	50·7	69·1	44·9	80·0	36·0	W N W	246	3	...	Fine.
6	29·969	56·1	51·5	66·1	43·6	79·0	34·0	N W	145	7	...	Cloudy.
7	29·952	57·5	52·4	70·2	47·2	86·5	38·5	N W	141	8	...	Fine at night.
8	29·956	56·2	52·8	67·2	43·4	77·9	35·0	N N W	148	10	...	Overcast.
9	29·884	57·4	53·0	66·2	50·5	82·5	45·0	N N W	287	9	0·01	Rain at 14^h.
10	29·895	60·0	56·6	74·1	52·5	87·0	47·5	N	455	6	...	Cloudy.
11	29·930	59·1	56·5	74·0	50·5	86·6	45·0	N	408	7	...	Overcast after 6^h
12	29·891	57·0	53·8	71·4	49·3	87·8	40·0	N	261	6	...	Fine till 11^h.
13	29·892	57·6	54·7	72·6	48·0	84·0	41·5	N by E	226	3	...	Fine till 11^h.
14	29·888	63·3	57·0	76·1	47·5	82·8	39·5	N by E	70	0	...	Fine. Haze.
15	29·916	63·3	57·1	79·1	48·3	94·0	42·0	N by E	108	4	...	Fair.
16	29·928	64·4	59·0	75·9	50·5	88·8	45·5	N by E	88	4	...	Fine. Hazy.
17	29·918	68·1	61·8	82·1	51·5	92·6	46·5	N by W	125	5	...	Fair. Cloudy.
18	29·882	66·4	61·2	76·0	59·6	89·0	57·0	N N W	92	9	...	Cloudy.
19	29·903	68·0	62·0	82·0	54·4	94·2	47·0	W	128	4	...	Fine.
20	29·783	67·0	60·3	81·3	52·5	98·5	49·0	S S W	223	3	...	Fine.
21	29·666	62·3	57·9	76·3	53·7	90·0	51·0	S by W	321	7	0·12	Rain at 5^h.
22	29·726	62·0	58·6	68·1	53·6	82·2	51·5	S S W	317	7	...	Fine after 10^h.
23	29·773	63·3	57·5	74·5	48·7	90·0	44·0	S W	259	2	...	Fine.
24	29·636	62·9	56·7	76·1	56·5	90·0	50·0	S W	314	9	...	Cloudy.
25	29·513	61·8	58·7	72·2	54·9	86·5	52·0	S W	341	10	0·07	Rain, 5^h-7^h.
26	29·747	61·6	54·9	73·8	45·9	84·8	40·0	W	141	6	...	Fair.
27	29·669	65·5	56·9	76·1	57·1	89·5	55·0	S S E	222	8	...	Overcast after 6^h
28	29·716	61·8	57·8	73·2	50·5	81·0	47·0	S by W	270	6	0·03	Fine after 10^h.
29	29·933	63·8	58·6	74·2	52·9	89·8	50·0	S	237	5	...	Fine till 14^h.
30	29·982	64·1	61·0	75·2	54·5	79·1	49·5	S	257	7	...	Light showers.
31	29·848	63·8	58·8	77·0	52·5	82·0	48·5	S by W	386	9	0·01	Cloudy.
Mean or Sum.	29·818	61·2	56·3	72·9	50·6	85·2	45·0	S 58 W	7467	6	0·47	

The corrections 0°·0 and + 0°·7 have been applied to the mean readings of the thermograph and hygrograph; and − 0°·9 and + 0°·5 to the readings of the self-registering max. and min. air-thermometers, to reduce them to the readings of the standards.

MOON'S PHASES, &c.

	d.	h.		d.	h.
New	3	12	Full	18	19
Apogee	7	20	Perigee	20	2
First Quarter	11	16	Last Quarter............	25	9

AUGUST, 1864.

Day.	Mean Barom. reduced to 32°.	Mean Temperature.		Self-Registering Thermometers.				Wind.		Amount of Cloud.	Rain.	Weather.
		Air.	Evap.	Shade. Max.	Shade. Min.	Sun. Max.	Grass. Min.	Direction.	Horizontal Motion.			
	Inches.	°	°	°	°	°	°		Miles.		Inches.	
1	29·886	58·5	52·8	70·6	47·6	83·0	42·0	S W	246	7	...	Cloudy.
2	29·947	56·9	49·8	67·7	41·6	82·2	35·0	W	180	5	...	Cloudy.
3	29·861	62·7	54·6	72·2	52·8	89·0	52·5	S	157	7	...	Cloudy.
4	29·902	65·3	61·5	78·2	54·8	93·5	54·0	S S W	263	7	...	Fair.
5	29·918	67·4	60·1	82·0	55·7	96·4	55·0	S W	218	9	...	Cloudy.
6	29·853	63·9	56·1	78·3	49·7	96·1	44·5	W S W	166	4	...	Fine.
7	29·704	66·5	59·9	76·2	61·7	92·5	61·0	S S W	386	9	...	Overcast.
8	29·640	61·1	57·5	77·2	53·6	90·0	54·0	W	224	6	0·28	Rain after 18^h.
9	29·726	56·3	54·0	65·0	44·6	67·6	40·0	S S W	277	5	0·07	Fine after 8^h.
10	30·002	55·2	49·5	64·9	45·6	74·0	41·0	W by N	261	3	...	Fine after 6^h.
11	30·170	55·7	50·0	66·2	40·6	82·0	36·0	N N W	97	4	...	Fair.
12	30·137	60·9	54·2	70·2	45·7	90·0	42·5	S W	94	3	...	Fine.
13	30·198	64·7	58·6	78·2	49·5	93·0	46·0	N N E	86	0	...	Fine.
14	30·236	65·7	60·2	79·2	51·6	98·5	48·5	N N E	132	1	...	Fine.
15	30·193	60·1	56·7	71·2	53·0	88·0	47·0	N N W	259	7	...	Fine till 9^h.
16	29·962	64·4	60·0	75·5	55·9	86·2	53·0	N W	228	7	...	Fine till 12^h.
17	29·878	56·5	52·8	66·2	45·2	80·8	41·5	N N E	176	9	...	Overcast.
18	29·650	54·4	49·7	66·3	42·6	83·8	38·0	N	97	7	...	Cloudy.
19	29·520	58·7	51·5	68·1	48·8	85·8	48·5	N by W	152	9	0·04	Rain at 17^h.
20	29·648	54·0	48·8	65·2	43·6	82·1	39·5	N N W	73	3	0·11	Thundershower.
21	29·767	51·4	49·2	63·2	38·6	77·2	34·0	W N W	147	5	...	Fine.
22	29·661	55·4	50·4	64·2	50·5	83·0	52·0	N N E	382	10	...	Overcast.
23	29·739	51·5	49·1	61·2	42·7	74·6	37·0	N W	351	7	...	Fine after 11^h.
24	29·959	51·3	48·0	61·8	34·6	72·0	30·0	W S W	207	6	...	Fine, 9^h-21^h.
25	30·047	51·0	47·3	61·9	40·2	70·0	32·0	N N W	104	7	...	Cloudy till 19^h.
26	30·158	50·1	45·7	62·8	32·4	77·5	28·5	N N E	117	2	...	Fine. Fog.
27	30·024	58·7	53·4	67·2	53·6	81·1	53·0	S S E	222	10	0·02	Overcast.
28	29·888	59·2	58·1	68·2	54·4	78·4	51·5	S W	249	9	0·18	Rain till 5^h.
29	29·784	63·2	57·1	73·0	43·6	90·0	41·5	S S W	201	3	...	Fine.
30	29·586	61·8	61·1	78·4	62·1	90·0	63·0	S S W	456	8	0·06	Gentle showers.
31	29·776	56·1	53·9	64·4	48·6	84·1	45·0	W S W	352	4	0·02	Fine after 3^h.
Mean or Sum.	29·885	58·7	53·9	69·8	47·9	84·3	44·7	W 2 S	6560	6	0·78	

The corrections $-0°·8$ and $+0°·6$ have been applied to the readings of the self-registering max. and min. air-thermometers, to reduce them to the readings of the standards.

MOON'S PHASES, &c.

	d.	h.		d.	h.
New	2	3	Perigee	17	10
Apogee	4	8	Last Quarter	23	18
First Quarter	10	6	Apogee	31	12
Full	17	2	New	31	18

SEPTEMBER, 1864.

Day.	Mean Barom. reduced to 32°.	Mean Temperature.		Self-Registering Thermometers.				Wind.		Amount of Cloud.	Rain.	Weather.
				Shade.		Sun.	Grass.					
		Air.	Evap.	Max.	Min.	Max.	Min.	Direction.	Horizontal Motion.			
	Inches.	°	°	°	°	°	°		Miles.		Inches.	
1	29·742	58·9	55·3	67·4	51·9	...	49·5	S by E	384	7	...	Fair.
2	29·552	58·7	56·2	66·3	51·7	76·3	48·0	S by W	259	7	0·07	Showers. Fine.
3	29·548	57·5	54·4	67·5	50·7	81·9	46·0	S W	213	8	...	Fine after 12ʰ.
4	29·686	58·8	55·0	67·4	52·7	82·2	49·0	S S W	357	8	0·69	Rain, 10ʰ-12ʰ.
5	29·844	57·1	53·7	65·4	50·0	79·1	46·0	S S W	277	6	0·13	Rain, 20ʰ-22ʰ.
6	29·733	63·7	61·3	66·4	60·7	68·1	59·0	S	545	10	...	Overcast.
7	29·781	64·9	62·2	69·6	63·7	69·3	63·0	S by W	407	10	0·01	Overcast.
8	29·759	65·6	62·2	70·4	63·1	81·8	62·0	S	487	8	...	Overcast.
9	29·779	59·0	56·0	72·7	50·7	82·0	48·0	S S W	396	10	0·01	Overcast.
10	29·635	55·7	52·6	64·6	46·5	79·0	43·0	W	252	8	0·04	Rain at 9ʰ.
11	29·751	51·3	46·3	59·6	41·7	73·0	38·0	S W	267	4	...	Variable.
12	29·814	53·1	50·2	62·2	45·0	...	40·0	W by S	173	7	0·05	Variable.
13	29·600	56·5	55·2	64·4	51·3	...	47·0	S S W	332	7	0·06	Rain at 4ʰ.
14	29·366	54·0	51·6	63·4	43·7	...	40·0	S S W	285	6	0·42	Heavy rain. Fine
15	29·225	57·3	54·7	64·7	53·0	...	48·0	S S W	348	5	0·97	Heavy rain at 6ʰ.
16	29·157	55·7	52·8	63·5	47·1	...	46·0	W S W	293	7	...	Variable.
17	29·344	53·2	50·9	62·3	46·0	78·0	44·0	S S W	256	8	0·80	Thunderstorm.
18	29·488	53·5	51·4	62·7	44·5	80·6	40·0	W by S	268	4	0·03	Fine.
19	29·636	53·3	50·3	62·3	43·0	80·8	39·0	S W	192	3	0·04	Variable.
20	29·580	55·5	52·6	62·0	51·0	82·0	48·0	S by E	290	7	0·03	Variable.
21	29·559	58·0	55·3	64·4	53·7	82·3	49·0	S S E	282	8	0·03	Variable.
22	29·681	55·2	52·9	65·5	46·6	82·2	41·0	S by W	277	5	0·14	Overcast till 10ʰ.
23	29·860	58·2	55·2	63·5	54·7	82·3	50·0	S by W	156	7	0·02	Very variable.
24	30·056	52·7	50·6	62·7	45·0	82·5	38·5	S W	279	6	...	Fair. Fog.
25	30·153	55·3	54·1	64·4	42·2	79·6	39·0	S W	60	3	...	Fine. Fog.
26	30·123	56·6	54·5	65·3	42·2	81·1	37·0	S E	136	0	...	Thin fog at night
27	30·078	53·0	49·6	66·0	42·5	81·1	36·0	N by E	149	0	...	Fine. Fog.
28	30·040	55·8	52·5	67·1	44·7	88·8	37·0	N W	152	1	...	Fine. Haze.
29	29·935	55·2	51·2	63·4	44·8	82·0	39·0	N W	167	1	...	Fine.
30	29·960	50·4	46·6	58·4	40·7	80·0	33·0	N by E	157	3	...	Fine.
Mean or Sum.	29·716	56·5	53·6	64·9	48·8	...	44·8	S 12 W	8096	6	2·94	

The corrections 0°·0 and −0°·9 have been applied to the mean readings of the thermograph and hygrograph; and −0°·6 and +0°·7 to the readings of the self-registering max. and min. air-thermometers, to reduce them to the readings of the standards.

MOON'S PHASES, &c.

	d.	h.		d.	h.
First Quarter	8	18	Last Quarter............	22	7
Perigee	14	20	Apogee	27	17
Full	15	9	New	30	11

OCTOBER, 1864.

Day.	Mean Barom. reduced to 32°.	Mean Temperature.		Self-Registering Thermometers.				Wind.		Amount of Cloud.	Rain.	Weather.
		Air.	Evap.	Shade. Max.	Shade. Min.	Sun. Max.	Grass. Min.	Direction.	Horizontal Motion.			
	Inches.	°	°	°	°	°	°		Miles.		Inches.	
1	29·936	51·0	48·6	59·8	41·6	75·1	40·0	N by E	305	6	...	Fine at night.
2	30·093	48·9	46·6	58·8	39·2	73·0	34·0	N E	334	8	...	Fair.
3	30·045	47·3	46·3	53·5	42·6	67·0	39·0	N E	398	1	...	Fine.
4	29·913	47·5	45·9	52·1	42·1	...	38·0	N E	429	3	...	Fine.
5	29·904	46·6	43·5	57·5	37·4	73·7	31·0	N by E	252	0	...	Fine.
6	30·023	50·7	47·0	59·8	42·0	77·1	33·5	N N E	239	5	...	Fine.
7	30·049	49·2	45·8	60·9	38·7	79·0	34·0	N by E	224	0	...	Fine.
8	30·016	52·7	48·1	58·9	48·0	...	44·0	N N E	270	7	...	Overcast after 5^h
9	30·022	49·6	46·1	54·3	43·7	75·0	40·0	N N W	203	10	...	Overcast.
10	30·157	49·5	45·7	53·8	44·2	69·1	39·5	N W	160	10	...	Fog after 19^h.
11	30·131	49·4	46·1	54·8	42·7	64·0	34·0	W N W	230	10	...	Fog after 19^h.
12	30·016	52·4	48·6	57·3	50·7	62·0	50·0	W	205	10	...	Overcast.
13	29·888	52·3	49·3	54·8	50·7	58·1	49·0	W by N	201	10	...	Overcast.
14	29·897	48·0	45·1	57·3	38·3	68·0	30·0	W N W	175	3	...	Fair.
15	29·827	49·7	46·1	54·6	44·7	71·8	41·0	S E	196	9	...	Overcast.
16	29·506	52·3	47·2	56·6	49·6	65·0	47·0	S by W	467	9	0·07	Sprinklings.
17	29·442	51·7	49·7	57·6	48·1	64·0	45·0	S by W	357	10	0·03	Showers.
18	29·333	53·6	51·1	59·8	49·5	67·3	47·0	S E	241	8	...	Fair.
19	28·859	57·4	53·7	64·8	46·9	70·0	44·0	S S E	573	9	0·12	Stormy night.
20	29·277	47·1	44·8	54·8	39·5	64·0	33·0	S E	334	4	0·06	Fine. Drizzle.
21	29·060	52·0	49·9	56·4	48·7	58·1	46·5	E by S	233	10	0·29	Rain, 6^h-9^h.
22	28·781	52·9	50·8	58·0	50·1	64·2	48·0	S E	453	10	0·23	Showery.
23	29·020	48·4	45·5	56·0	39·7	61·1	37·0	S S E	339	6	...	Fine at night.
24	29·274	46·2	44·7	55·8	37·8	61·0	32·0	N E	90	7	...	Fine night. Fog.
25	29·204	52·0	50·8	55·8	48·3	62·0	43·0	N N E	249	10	...	Overcast.
26	29·071	53·5	52·9	57·8	52·3	67·6	52·0	N by W	226	10	0·75	Rain, 10^h-20^h.
27	29·202	53·6	53·0	57·8	49·7	58·1	47·0	S W	100	10	0·02	Overcast. Fog.
28	29·389	51·7	50·2	56·9	49·7	66·0	42·5	N N E	217	9	...	Fine till 9^h.
29	29·641	49·0	46·9	53·9	46·6	62·0	46·0	N	241	10	...	Overcast.
30	29·907	44·8	42·5	49·8	40·7	58·6	33·0	N by E	246	6	...	Fine at night.
31	30·014	41·1	39·5	49·8	34·7	63·6	30·5	N by E	200	5	...	Fair. Fine night.
Mean or Sum.	29·642	50·1	47·5	56·4	44·5	66·4	40·3	N 45 E	8387	7	1·57	

The corrections 0°·0 and + 0°·6 have been applied to the mean readings of the thermograph and hygrograph; and − 0°·2 and + 0°·7 to the readings of the self-registering max. and min. air-thermometers, to reduce them to the readings of the standards.

MOON'S PHASES, &c.

	d.	h.		d.	h.
First Quarter	8	4	Last Quarter............	21	23
Perigee................	13	6	Apogee.................	25	6
Full	14	18	New	30	3

NOVEMBER, 1864.

Day.	Mean Barom. reduced to 32°.	Mean Temperature.		Self-Registering Thermometers.				Wind.		Amount of Cloud.	Rain.	Weather.
		Air.	Evap.	Shade. Max.	Shade. Min.	Sun. Max.	Grass. Min.	Direction.	Horizontal Motion.			
	Inches.	°	°	°	°	°	°		Miles.		Inches.	
1	29·993	43·6	40·0	47·0	40·8	57·0	37·0	N	126	10	...	Overcast.
2	30·015	41·6	38·6	46·8	34·2	60·8	28·0	N N W	202	7	...	Overcast till 19^h.
3	30·191	36·4	34·4	48·9	25·8	64·0	22·0	N W	77	0	...	Fine. Fog.
4	30·191	40·0	39·4	47·9	31·8	63·1	27·0	S S W	183	4	...	Fine till 10^h.
5	30·290	40·6	40·2	48·9	33·8	55·1	26·0	N W	174	3	...	Fine after 5^h.
6	30·425	35·8	35·8	47·0	25·2	62·3	21·0	N by W	150	5	...	Fine after 7^h.
7	30·039	36·3	34·6	41·9	29·7	60·0	27·0	N N W	70	9	...	Overcast. Fog.
8	29·972	39·6	38·3	46·2	34·7	56·9	30·5	N N W	124	4	...	Fine, 9^h-12^h.
9	29·945	37·2	36·1	46·7	28·8	62·0	24·0	N	183	7	...	Fine after 10^h.
10	29·796	34·0	32·0	43·9	26·8	60·0	20·0	N N W	173	5	...	Fine. Fog.
11	29·679	37·0	35·0	39·9	32·2	44·5	31·0	N E	91	10	...	Overcast.
12	29·409	40·8	39·5	45·8	32·8	46·2	30·0	E S E	227	7	0·05	Rain after 20^h.
13	28·680	46·7	45·7	49·9	42·8	53·8	39·5	S E	302	7	0·25	Rain till 10^h.
14	28·560	41·7	40·4	50·8	36·3	57·1	32·5	S E	271	7	0·06	Showers till 2^h.
15	28·867	42·6	41·9	45·9	39·2	49·0	34·0	W N W	186	6	...	Thin fog.
16	29·223	41·7	40·4	48·0	30·7	56·0	28·0	S by W	213	9	0·13	Foggy. Rain.
17	28·893	50·7	48·1	54·0	45·7	53·8	45·0	S S E	632	10	0·26	Showery.
18	29·473	44·2	41·4	51·9	38·8	53·0	34·0	S by E	486	9	...	Fog after 20^h.
19	29·426	48·2	46·3	52·9	45·7	56·2	44·0	E S E	320	10	...	Overcast.
20	29·478	46·0	44·4	52·9	36·9	56·0	32·0	E by S	129	7	...	Cloudy.
21	29·513	49·4	47·1	51·9	46·8	55·9	44·0	S S E	440	10	0·19	Rain at night.
22	29·409	40·8	39·1	50·7	36·8	49·0	33·0	S	251	4	0·02	Fine after 5^h.
23	29·218	40·5	39·4	45·8	35·9	48·2	36·0	N N E	206	10	0·70	Rain, 8^h-21^h.
24	29·108	36·1	35·2	40·9	31·0	42·2	26·0	S S W	210	6	...	Fine after 5^h.
25	28·789	41·2	39·2	45·0	34·5	50·0	31·0	S	472	2	0·12	Rain, 5^h-10^h.
26	29·166	40·2	37·8	45·9	35·8	52·8	31·5	S S W	463	5	...	Fine after 5^h.
27	29·551	48·6	46·8	53·9	42·1	53·1	39·0	S S E	364	10	0·02	Drizzle.
28	29·795	43·7	41·1	54·8	36·6	55·0	32·0	S S W	506	4	0·01	Fine after 5^h.
29	30·056	43·7	41·0	48·0	37·0	56·2	35·0	S S E	345	5	...	Fine till 12^h.
30	29·857	42·1	40·6	48·9	36·8	48·8	32·0	S by E	346	4	0·53	Rain, 2^h-8^h.
Mean or Sum.	29·567	41·7	40·0	48·1	35·5	54·6	31·7	S 4 E	7922	7	2·34	

The corrections $-0°{\cdot}5$ and $-0°{\cdot}3$ have been applied to the mean readings of the thermograph and hygrograph; and $-0°{\cdot}1$ and $+0°{\cdot}8$ to the readings of the self-registering max. and min. air-thermometers, to reduce them to the readings of the standards.

MOON'S PHASES, &c.

	d.	h.		d.	h.
First Quarter	6	12	Last Quarter..........	20	19
Perigee................	10	6	Apogee................	22	1
Full..................	13	6	New..................	28	19

DECEMBER, 1864.

Day.	Mean Barom. reduced to 32°.	Mean Temperature.		Self-Registering Thermometers.				Wind.		Amount of Cloud.	Rain.	Weather.
		Air.	Evap.	Shade. Max.	Shade. Min.	Sun. Max.	Grass. Min.	Direction.	Horizontal Motion.			
	Inches.	°	°	°	°	°	°		Miles.		Inches.	
1	30·072	38·5	37·7	46·4	31·5	55·6	26·0	S S W	159	1	...	Fine. Thin fog.
2	30·142	43·6	42·5	48·8	36·2	48·0	32·5	S S E	246	9	...	Overcast.
3	30·090	48·3	46·9	50·8	46·6	50·5	45·0	S S E	384	10	0·01	Rainy till 8ʰ.
4	29·973	49·1	47·2	52·3	46·7	58·0	45·0	S by E	368	9	...	Overcast.
5	29·758	49·1	46·7	52·8	45·7	59·2	40·0	S	364	7	...	Fine till 7ʰ.
6	29·763	44·5	43·7	50·9	37·5	57·1	32·0	S S E	379	5	...	Fine till 11ʰ.
7	29·490	47·3	46·2	49·5	43·8	53·0	43·0	S E	424	10	0·19	Rain, 11ʰ-22ʰ.
8	29·500	40·7	39·7	46·3	31·8	55·2	32·0	S S E	186	6	0·01	Fine. Fog.
9	29·629	44·3	43·4	45·9	32·7	55·0	32·0	E S E	375	9	...	Cloudy.
10	29·572	44·2	43·5	46·5	41·6	46·4	40·0	E S E	78	10	...	Overcast.
11	29·345	47·3	46·0	50·1	46·1	57·0	45·0	S E	444	7	0·03	Fine at noon.
12	29·302	41·6	41·0	47·9	36·0	46·1	32·0	S E	237	7	0·12	Rain till 3ʰ.
13	29·431	41·8	40·8	46·1	36·7	49·1	36·0	N E	199	8	...	Cloudy.
14	29·614	36·7	35·3	39·8	32·7	39·0	34·0	N by E	290	10	...	Dense cloud.
15	29·525	35·3	33·8	36·5	33·5	36·0	33·0	N	250	10	...	Dense cloud.
16	29·675	31·4	31·2	33·7	28·3	34·5	23·0	N by W	308	10	...	Snow after 19ʰ.
17	29·626	25·2	25·0	31·8	20·4	33·0	16·0	N W	99	10	...	Snowshowers.
18	29·663	33·2	33·0	35·8	28·7	35·0	27·0	E	141	9	...	Snowshowers.
19	29·634	38·5	37·5	43·7	30·5	43·2	30·0	E S E	248	10	...	Snow. Drizzle.
20	29·768	41·4	41·1	45·3	38·0	45·0	35·0	E by S	112	8	...	Cloudy.
21	29·884	37·7	36·0	40·9	34·5	47·4	35·0	N W	384	10	...	Overcast.
22	30·138	32·9	32·2	35·9	32·1	36·0	31·0	N N E	419	10	...	Overcast.
23	30·316	29·9	30·2	32·9	27·5	32·5	25·0	N by E	413	10	...	Overcast.
24	30·331	29·9	30·1	32·2	27·5	33·0	29·0	N N E	249	10	...	Overcast.
25	30·182	32·4	32·4	32·9	31·2	33·0	31·0	N E	157	10	...	Overcast.
26	30·108	31·0	31·0	32·9	28·5	33·0	25·0	N N W	106	10	...	Overcast. Fog.
27	30·113	32·9	32·9	33·9	29·7	36·3	29·0	W S W	162	5	...	Fine after 10ʰ.
28	30·163	40·5	39·5	41·9	32·5	42·1	32·0	S S W	121	10	...	Thin fog.
29	29·970	41·7	39·6	43·3	39·5	43·2	28·5	S	254	10	...	Overcast.
30	29·692	37·1	35·6	41·9	30·0	42·1	23·0	W by S	156	10	...	Drizzle at 10ʰ.
31	29·629	32·8	32·3	35·1	28·5	39·2	26·0	N	222	7	0·01	Light snow.
Mean or Sum.	29·809	38·7	37·9	42·1	34·4	44·3	32·1	E 7 S	7934	9	0·37	

The corrections − 0°·5 and − 0°·3 have been applied to the mean readings of the thermograph and hygrograph; and − 0°·1 and + 0°·5 to the readings of the self-registering max. and min. air-thermometers, to reduce them to the readings of the standards.

MOON'S PHASES, &c.

	d.	h.		d.	h.
First Quarter	5	20	Apogee	19	21
Perigee	6	10	Last Quarter	20	17
Full	12	19	New	28	9

***Readings of Two Self-Registering Maximum and Minimum Thermometers placed above the Tower of the Radcliffe Observatory, at an elevation of* 105 *feet, (reduced to the Readings of the Standard Thermometers,) in the Year* 1864.**

JANUARY, FEBRUARY, MARCH, APRIL.

1864.	Max.	Min.	1864.	Max.	Min.	1864.	Max.	Min.	1864.	Max.	Min.
	°	°		°	°		°	°		°	°
Jan. 1	34·9	23·5	Feb. 1	49·0	41·7	March 1	47·8	28·8	April 1	48·8	33·3
2	33·3	21·7	2	51·0	46·4	2	46·3	35·4	2	51·4	38·1
3	32·9	19·4	3	47·7	31·6	3	50·2	35·7	3	56·7	44·3
4	29·1	22·3	4	40·6	29·1	4	57·4	39·6	4	61·6	36·8
5	29·8	14·9	5	36·5	29·3	5	49·7	39·6	5	41·6	34·3
6	26·0	14·4	6	36·6	23·8	6	51·9	41·9	6	46·7	41·2
7	29·2	20·3	7	32·5	27·3	7	48·9	28·4	7	50·9	40·6
8	34·7	21·2	8	34·4	20·3	8	39·3	32·9	8	55·0	42·3
9	40·9	31·6	9	36·5	18·8	9	...	...	9	56·9	44·7
10	43·2	39·9	10	39·2	29·0	10	...	...	10	59·8	51·2
11	45·6	39·8	11	45·0	32·3	11	49·6	35·9	11	63·3	39·3
12	41·9	32·8	12	53·3	45·3	12	48·8	38·2	12	56·4	34·2
13	37·6	34·9	13	56·4	37·4	13	50·8	45·7	13	57·0	35·9
14	36·7	34·2	14	51·1	43·1	14	53·6	45·7	14	60·6	39·2
15	40·0	35·4	15	53·6	43·2	15	51·8	32·6	15	65·8	43·3
16	40·0	32·2	16	48·2	32·6	16	47·9	34·6	16	48·6	42·0
17	42·6	35·6	17	43·0	28·3	17	48·9	29·3	17	56·3	38·3
18	44·7	38·5	18	39·3	28·2	18	49·7	30·2	18	59·6	38·6
19	47·8	42·4	19	32·3	24·5	19	61·7	31·4	19	64·4	45·8
20	48·8	40·4	20	30·3	25·8	20	59·6	34·8	20	71·0	50·5
21	51·1	41·8	21	32·3	28·3	21	46·0	37·3	21	68·9	37·3
22	53·7	45·9	22	34·5	28·5	22	42·8	35·6	22	65·4	36·4
23	48·7	34·3	23	36·5	23·3	23	47·6	27·5	23	66·2	36·8
24	45·0	36·8	24	37·6	29·8	24	53·9	27·0	24	56·5	35·8
25	47·3	38·5	25	37·4	33·9	25	56·9	37·5	25	60·7	40·3
26	47·9	40·4	26	37·6	34·3	26	40·8	31·4	26	55·8	43·3
27	50·6	39·4	27	42·3	36·5	27	46·4	36·9	27	55·4	41·3
28	47·9	35·9	28	48·8	40·5	28	46·8	33·5	28	50·3	41·6
29	39·7	27·4	29	48·3	37·5	29	46·8	33·2	29	62·0	44·3
30	37·8	32·4				30	49·0	33·4	30	56·9	42·8
31	43·9	33·4				31	52·1	38·7			
Means	41·1	32·3	Means	41·8	32·2	Means	49·8	34·9	Means	57·7	40·5

The corrections $-1^{\circ}\cdot2$ and $-0^{\circ}\cdot6$ to Jan.; $-1^{\circ}\cdot5$ and $-0^{\circ}\cdot7$ to Feb.; $-1^{\circ}\cdot2$ and $-0^{\circ}\cdot6$ to Mar.; $-1^{\circ}\cdot2$ and $-0^{\circ}\cdot7$ to Apr., have been applied, to reduce to the standard thermometer.

MAY, JUNE, JULY, AUGUST.											
1864.	Max.	Min.	1864.	Max.	Min.	1864.	Max.	Min.	1864.	Max.	Min.
	°	°		°	°		°	°		°	°
May 1	62·3	52·2	June 1	62·5	40·4	July 1	63·0	52·2	Aug. 1	68·2	48·2
2	62·9	52·7	2	65·4	47·4	2	68·5	50·7	2	67·4	46·5
3	64·8	48·2	3	58·3	39·2	3	61·2	44·0	3	72·9	54·3
4	55·5	47·1	4	67·5	45·0	4	63·7	47·1	4	76·4	55·2
5	57·6	45·3	5	64·6	51·4	5	68·1	46·2	5	80·9	56·5
6	63·5	45·4	6	70·1	49·0	6	65·2	44·7	6	76·7	50·4
7	59·8	39·7	7	71·8	56·5	7	69·7	48·1	7	73·7	61·6
8	54·7	43·2	8	69·5	48·3	8	66·7	43·2	8	76·0	52·3
9	54·7	44·3	9	68·5	44·6	9	64·5	50·1	9	62·4	45·3
10	58·3	46·7	10	68·1	52·1	10	72·7	52·2	10	63·9	46·3
11	60·7	49·3	11	64·5	49·0	11	72·7	50·1	11	67·1	42·7
12	64·3	45·0	12	66·5	48·8	12	70·3	48·9	12	74·1	49·5
13	66·8	45·4	13	67·5	47·8	13	70·4	47·3	13	79·8	51·8
14	74·5	53·2	14	64·0	50·0	14	75·3	51·7	14	80·3	52·4
15	79·3	52·3	15	62·3	46·8	15	80·5	49·2	15	71·4	52·9
16	74·9	47·7	16	66·6	52·3	16	74·9	52·2	16	76·9	55·3
17	79·8	53·0	17	72·1	57·5	17	83·5	51·5	17	65·7	45·6
18	83·7	57·3	18	66·8	49·5	18	76·2	60·4	18	67·5	44·3
19	84·9	56·5	19	64·9	48·8	19	84·5	56·6	19	71·9	47·7
20	77·5	49·5	20	69·0	56·0	20	80·8	53·1	20	66·9	45·3
21	62·7	53·2	21	64·6	52·1	21	73·7	54·2	21	62·7	39·4
22	67·7	49·0	22	67·5	51·0	22	66·7	54·2	22	63·8	49·9
23	58·7	38·6	23	63·4	45·3	23	72·7	51·2	23	60·9	43·1
24	60·6	39·8	24	62·5	53·0	24	73·8	56·2	24	62·6	37·5
25	62·8	44·8	25	66·5	56·0	25	69·7	55·3	25	63·0	41·2
26	54·2	36·4	26	66·6	45·5	26	73·1	48·1	26	63·5	37·6
27	62·2	43·5	27	62·3	48·9	27	74·0	57·2	27	68·1	53·7
28	65·1	42·0	28	65·9	54·0	28	71·5	51·2	28	67·9	56·2
29	56·3	35·0	29	67·6	56·0	29	72·7	53·5	29	74·0	51·7
30	58·7	45·6	30	64·3	49·0	30	73·9	55·2	30	78·9	61·3
31	52·2	42·2				31	75·9	53·2	31	64·7	49·3
Means	64·6	46·6	Means	66·1	49·7	Means	71·9	51·3	Means	70·0	49·2

The corrections $-1^\circ\cdot3$ and $-0^\circ\cdot8$ to May; $-1^\circ\cdot5$ and $-1^\circ\cdot0$ to June; $-1^\circ\cdot3$ and $-0^\circ\cdot8$ to July; $-1^\circ\cdot1$ and $-0^\circ\cdot7$ to Aug., have been applied, to reduce to the standard thermometer.

SEPTEMBER, OCTOBER, NOVEMBER, DECEMBER.

1864.	Max.	Min.	1864.	Max.	Min.	1864.	Max.	Min.	1864.	Max.	Min.
	°	°		°	°		°	°		°	°
Sept. 1	66·9	52·5	Oct. 1	59·9	42·8	Nov. 1	47·1	41·2	Dec. 1	47·7	34·8
2	65·6	53·2	2	59·0	38·9	2	46·8	35·6	2	49·1	38·6
3	67·6	51·1	3	54·0	42·0	3	49·6	28·4	3	50·7	46·7
4	67·7	52·7	4	52·9	41·5	4	50·9	35·4	4	51·8	42·4
5	65·2	50·6	5	58·6	37·4	5	48·5	34·6	5	53·7	46·9
6	66·4	60·6	6	61·8	44·7	6	47·4	28·5	6	50·8	40·1
7	69·0	63·8	7	62·2	38·8	7	43·9	33·5	7	49·7	43·5
8	69·4	63·3	8	60·8	48·2	8	46·6	33·7	8	46·8	34·4
9	72·3	51·0	9	53·6	43·8	9	46·0	28·7	9	47·3	36·8
10	64·8	46·6	10	53·5	44·3	10	44·1	26·5	10	46·5	42·2
11	59·8	42·3	11	54·4	44·3	11	40·5	32·4	11	51·6	46·5
12	61·9	46·6	12	56·8	50·4	12	46·5	36·5	12	48·1	38·4
13	65·5	51·7	13	53·9	50·5	13	49·9	43·5	13	46·1	36·7
14	63·0	45·6	14	57·6	41·2	14	50·8	36·9	14	39·7	32·6
15	65·2	53·8	15	56·8	45·4	15	44·8	38·9	15	36·7	33·1
16	64·4	48·1	16	55·8	50·0	16	48·1	37·5	16	34·5	28·3
17	62·8	46·6	17	57·0	48·6	17	55·2	46·3	17	30·5	19·9
18	63·8	46·4	18	61·8	50·3	18	52·1	40·7	18	35·7	27·5
19	63·0	43·9	19	65·9	47·8	19	53·6	45·8	19	44·1	32·0
20	62·9	51·4	20	54·3	41·7	20	53·8	41·5	20	45·5	38·3
21	65·0	54·4	21	56·1	48·7	21	52·1	46·7	21	41·2	35·1
22	66·0	47·6	22	58·6	50·4	22	50·8	37·6	22	35·8	30·7
23	64·0	54·9	23	55·8	40·8	23	46·1	35·3	23	33·1	26·3
24	62·9	42·4	24	56·8	38·5	24	40·9	32·0	24	32·4	28·1
25	66·2	43·8	25	56·4	49·2	25	46·0	37·6	25	32·9	31·2
26	68·3	44·8	26	57·6	52·0	26	46·3	37·0	26	32·8	28·1
27	68·1	41·9	27	56·7	50·4	27	54·5	43·3	27	34·8	29·7
28	69·0	47·4	28	57·6	48·7	28	55·1	36·9	28	42·8	32·6
29	64·8	50·1	29	53·7	46·3	29	48·8	38·5	29	43·7	40·1
30	59·7	42·4	30	49·4	39·4	30	49·4	38·4	30	41·7	29·8
			31	49·8	35·1				31	35·1	27·6
Means	65·4	49·7	Means	56·7	44·9	Means	48·5	37·0	Means	42·4	34·8

The corrections $-1^\circ \cdot 0$ and $-0^\circ \cdot 7$ to Sept.; $-1^\circ \cdot 2$ and $-0^\circ \cdot 6$ to Oct.; $-1^\circ \cdot 1$ and $-0^\circ \cdot 5$ to Nov.; $-1^\circ \cdot 3$ and $-0^\circ \cdot 7$ to Dec., have been applied, to reduce to the standard thermometer.

MEAN MONTHLY TEMPERATURES OF THE AIR,

AT THE HEIGHT OF 105 FEET ABOVE THE GROUND, 1864.

The following Table gives the Comparison of the Mean Monthly Temperature of the Air at the top of the Tower, (at an elevation of 105 feet,) and of the Air near the surface of the Ground, in the Year 1864, as obtained by the Readings of the Max. and Min. Thermometers above and below.

1864.	At height of 105 feet.	At height of 5 feet.	Excess at 105 feet.
	°	°	°
January......	36·7	36·1	+ 0·6
February ...	37·0	36·9	+ 0·1
March	42·4	42·3	+ 0·1
April.........	49·1	48·6	+ 0·5
May	55·6	55·5	+ 0·1
June	57·9	58·5	— 0·6
July	61·6	61·7	— 0·1
August	59·6	58·9	+ 0·7
September...	57·5	56·9	+ 0·6
October......	50·8	50·4	+ 0·4
November...	42·8	41·8	+ 1·0
December ...	38·6	38·2	+ 0·4

CHARACTERISTICS OF THE WEATHER, AND REMARKABLE PHENOMENA, FOR EACH MONTH, 1864.

JANUARY, 1864.

	d. h. h.	in.
Barom.	Highest, 3. 6 to 12, ...	30·445.
,,	Lowest, 22. 16, ...	29·450.
,,	Mean for the month, ...	29·989,
	being $0^{in}\cdot268$ above the average.	
		°
Temp.	Highest on the 22nd, ...	53·7.
,,	Lowest on the 6th, ...	12·7.
,,	Mean for the month, ...	36·9,
	being $0^{\circ}\cdot8$ below the average.	
,,	Highest in sunshine, ...	60·0.
,,	Lowest on grass, ...	10·5.

Rain fell on the 9th, 10th, 12th, 13th, 14th, 16th, 18th, 19th, 20th, 21st, 22nd, 23rd, and 26th, to the amount of $0^{in}\cdot98$, being $1^{in}\cdot01$ below the average.
Fog was prevalent on the 6th, 8th, 9th, 10th, 11th, 12th, 13th, 14th, 15th, 17th, 18th, and 30th.
Sleet fell on the 2nd at 22^h.
Lunar halo on the 20th at 9^h.
Dead calms on the 5th at 21^h, on the 6th, 7th, 8th, and on the 17th at 22^h.
Storms of wind on the 21st and 22nd.
Zodiacal light on the 31st.
Electricity on the 2nd, 5th, 6th, 7th, 8th, 9th, 12th, 13th, 15th, 17th, 25th, and 26th.

FEBRUARY, 1864.

	d. h.	in.
Barom.	Highest, 18. 14, ...	30·203.
,,	Lowest, 12. 0, ...	29·123.
,,	Mean for the month, ...	29·724,
	being $0^{in}\cdot024$ above the average.	
		°
Temp.	Highest on the 13th, ...	56·1.
,,	Lowest on the 9th, ...	17·7.
,,	Mean for the month, ...	36·4,
	being $2^{\circ}\cdot2$ below the average.	
,,	Highest in sunshine, ...	65·2.
,,	Lowest on grass, ...	14·0.

Rain fell on the 2nd, 3rd, 11th, 12th, 15th, 16th, 26th, 27th, 28th, and 29th, to the amount of $1^{in}\cdot45$, being $0^{in}\cdot38$ below the average.
Snow fell on the 4th, 6th, 10th, 11th, 16th, 19th, 20th, 21st, and 24th.
Fog on the 8th, 23rd, and 28th.
Storm of wind on the 13th.
Lunar halos of various forms on the 14th between 6^h and 10^h, and on the 16th at $10^h\ 50^m$.
Zodiacal light seen on the 4th, 6^h to 8^h.
Electricity on the 3rd, 16th, 27th, 28th, and 29th.

MARCH, 1864.

	d. h. h.	in.
Barom.	Highest, 12. 12 to 20,.........	30·048.
,,	Lowest, 6. 20 to 22,.........	28·668.
,,	Mean for the month, ...	29·462,
	being $0^{in}\cdot228$ below the average.	
		°
Temp.	Highest on the 19th, ...	60·8.
,,	Lowest on the 9th, 23rd, & 24th,	24·7.
,,	Mean for the month, ...	41·3,
	being $0^{\circ}\cdot1$ below the average.	
,,	Highest in sunshine, ...	76·0.
,,	Lowest on grass, ...	19·0.

Rain fell on the 1st, 3rd, 5th, 6th, 7th, 8th, 10th, 15th, 26th, 28th, 29th, and 31st, to the amount of $2^{in}\cdot47$, being $0^{in}\cdot66$ above the average.
Snow fell on the 8th, 9th, 26th, 28th, & 29th.
Hail fell on the 28th at $5^h\ 30^m$.
Fog was prevalent on the 1st, 3rd, and 24th.
Lightning was seen on the 11th, 9^h to 10^h.
Solar halos on the 9th (with mock sun) at $20^h\ 45^m$, and on the 30th at $21^h\ 40^m$.
Lunar halos on the 11th at $8^h\ 15^m$, and on the 16th from $11^h\ 45^m$ to $12^h\ 30^m$.
Brilliant lunar corona on the 16th at 10^h.
Bright zodiacal light on the 28th.
Storms of wind on the 28th.
Electricity on the 1st, 5th, 8th, 11th, 16th, 17th, 18th, 19th, 20th, 24th, 25th, 26th, and 27th.

APRIL, 1864.

	d. h. d. h.	in.
Barom.	Highest, 7. 18 to 8. 2, ...	30·175.
„	Lowest, 1. 0^h to 2^h, ...	29·464.
„	Mean for the month, ...	29·880,
	being $0^{in}\cdot180$ above the average.	
		°
Temp.	Highest on the 20th, ...	70·4.
„	Lowest on the 1st and 13th, ...	32·7.
„	Mean for the month, ...	47·7,
	being $1^\circ\cdot7$ above the average.	
„	Highest in sunshine, ...	86·2.
„	Lowest on grass, ...	25·0.

Rain fell on the 1st, 3rd, 4th, 5th, 6th, 8th, 15th, and 16th*, to the amount of $1^{in}\cdot63$, being $0^{in}\cdot31$ below the average.
Hail fell on the 1st at $1^h\,45^m$, and on the 4th at noon.
Fog was prevalent on the 9th and 23rd (thick).
Thunder and lightning on the 1st at 6^h.
Solar halo on the 24th at 22^h.
Lunar halos on the 11th, 8^h to 9^h; on the 17th, $9^h\,30^m$ to $10^h\,30^m$; and on the 18th, 8^h to 9^h.
Bright zodiacal light on the 2nd at $8^h\,30^m$.
Electricity on the 1st, 4th, 6th, 8th, 9th, 10th, 11th, 12th, 13th, 14th, 15th, 16th, 22nd, 23rd, 29th, and 30th.

* Of a very dark colour.

MAY, 1864.

	d. h.	in.
Barom.	Highest, 23. 22, ...	30·073.
„	Lowest, 8. 16 to 20^h, ...	29·436.
„	Mean for the month, ...	29·797,
	being $0^{in}\cdot064$ above the average.	
		°
Temp.	Highest on the 19th, ...	81·5.
„	Lowest on the 29th, ...	32·7.
„	Mean for the month, ...	54·7,
	being $2^\circ\cdot3$ above the average.	
„	Highest in sunshine, ...	101·5.
„	Lowest on grass, ...	26·0.

Rain fell on the 1st, 2nd, 3rd, 4th, 5th, 6th, 8th, 9th, 11th, 20th, 28th, 30th, and 31st, to the amount of $2^{in}\cdot16$, being $0^{in}\cdot01$ below the average.
A thunderstorm on the 20th, 9^h to 10^h.
Distant thunder was heard on the 15th about 6^h, and on the 19th 5^h to $7^h\,20^m$.
Dead calms on the 13th at 22^h, on the 17th, and 18th.
Electricity on the 1st, 3rd, 4th, 5th, 6th, 7th, 8th, 14th, 15th, 16th, 17th, 19th, 20th, 21st, 24th, 26th, 29th, and 30th.

JUNE, 1864.

	d. h. h.	in.
Barom.	Highest, 19. 8 to 12, ...	30·076.
„	Lowest, 14. 10, ...	29·251.
„	Mean for the month, ...	29·746,
	being $0^{in}\cdot021$ above the average.	
		°
Temp.	Highest on the 7th, ...	73·6.
„	Lowest on the 3rd, ...	37·4.
„	Mean for the month, ...	57·5,
	being $1^\circ\cdot1$ below the average.	
„	Highest in sunshine, ...	88·9.
„	Lowest on grass, ...	30·0.

Rain fell on the 9th, 11th, 12th, 14th, 15th, 17th, 22nd, 23rd, 24th, 25th, and 28th, to the amount of $1^{in}\cdot01$, being $1^{in}\cdot33$ below the average.
Hail fell on the 12th at 23^h.
Fog on the 6th, 14^h to 20^h.
Solar halos on the 1st at 22^h, and on the 11th at 7^h.
Electricity on the 5th, 6th, 7th, 8th, 9th, 10th, 12th, 13th, 15th, 17th, 18th, and 23rd.

JULY, 1864.

		d. h. h.	in.
Barom.	Highest,	30. 10 to 12,.........	30·005.
„	Lowest,	2. 10 to 18,.........	29·393.
„	Mean for the month,	....	29·818,
	being $0^{\text{in}}\cdot097$ above the average.		
			°
Temp.	Highest on the 17th,	....	82·1.
„	Lowest on the 8th,	....	43·4.
„	Mean for the month,	....	61·2,
	being $0^{\circ}\cdot2$ below the average.		
„	Highest in sunshine,	....	98·5.
„	Lowest on grass,	....	34·0.

Rain fell on the 2nd, 9th, 21st, 25th, 28th, 29th, 30th, and 31st, to the amount of $0^{\text{in}}\cdot47$, being $2^{\text{in}}\cdot04$ below the average.

Distant thunder on the 17th about 4^{h}.

Solar halo on the 28th about 6^{h}.

Dead calm on the 8th at 9^{h}.

Electricity on the 2nd, 3rd, 4th, 5th, 6th, 8th, 19th, 20th, and 26th.

AUGUST, 1864.

		d. h. h.	in.
Barom.	Highest,	14. 18 to 20,.........	30·274.
„	Lowest,	19. 6,..................	29·464.
„	Mean for the month,	....	29·885,
	being $0^{\text{in}}\cdot155$ above the average.		
			°
Temp.	Highest on the 5th,	....	82·0.
„	Lowest on the 26th,	....	32·4.
„	Mean for the month,	....	58·7,
	being $1^{\circ}\cdot0$ below the average.		
„	Highest in sunshine,	....	98·5.
„	Lowest on grass,	....	28·5.

Rain fell on the 3rd, 7th, 8th, 9th, 10th, 19th, 20th, 25th, 27th, 28th, 30th, and 31st, to the amount of $0^{\text{in}}\cdot78$, being $1^{\text{in}}\cdot85$ below the average.

Thin fog on the 12th and on the 26th at 20^{h}.

Lightning on the 13th at $9^{h}\ 30^{m}$, and on the 23rd at 11^{h}.

Thunder on the 20th at 18^{h}, and on the 21st at $1^{h}\ 30^{m}$.

Solar halo on the 11th, 20^{h} to 22^{h}, with mock sun at $21^{h}\ 30^{m}$, and on the 22nd at 5^{h}.

Dead calms on the 12th, 13th at 20^{h}, and 25th at $4^{h}\ 50^{m}$.

Electricity on the 13th, 21st, 23rd, 24th, and 25th.

SEPTEMBER, 1864.

		d. h. h.	in.
Barom.	Highest,	25. 20 to 22,.........	30·175.
„	Lowest,	15. 16, ...	29·081.
„	Mean for the month,	....	29·716,
	being $0^{\text{in}}\cdot002$ below the average.		
			°
Temp.	Highest on the 9th,	....	72·7.
„	Lowest on the 30th,	....	40·7.
„	Mean for the month,	....	56·5,
	being $1^{\circ}\cdot4$ above the average.		
„	Highest in sunshine,	....	88·8.
„	Lowest on grass,	....	33·0.

Rain fell on the 2nd, 4th, 5th, 7th, 8th, 10th, 12th, 13th, 14th, 15th, 17th, 18th, 19th, 20th, 21st, 22nd, and 23rd, to the amount of $2^{\text{in}}\cdot94$, being $0^{\text{in}}\cdot27$ above the average.

Thunder on the 11th at 4^{h} and 6^{h}.

Thunderstorm on the 17th at 2^{h}.

Lightning on the 2nd from 7^{h} to $8^{h}\ 30^{m}$, and on the 3rd at 9^{h}.

Fog on the 24th, 25th, 26th, and 27th.

Solar halo on the 4th, 2^{h} to 3^{h}.

Electricity on the 11th and 27th.

OCTOBER, 1864.

		d. h. h.	in.
Barom.	Highest,	10. 20 to 22,	30·203.
„	Lowest,	19. 14,	28·668.
„	Mean for the month, being 0^{in}·042 below the average.		29·642,
			°
Temp.	Highest on the 19th,		64·8.
„	Lowest on the 31st,		34·7.
„	Mean for the month, being 0°·8 above the average.		50·1,
„	Highest in sunshine,		79·0.
„	Lowest on grass,		30·0.

Rain fell on the 1st, 16th, 17th, 19th, 20th, 21st, 22nd, 26th, and 27th, to the amount of 1^{in}·57, being 1^{in}·06 below the average.

Fog on the 10th, 11th, 12th, 18th, 20th, 23rd, 24th, and 27th.

Electricity on the 6th and 25th.

NOVEMBER, 1864.

		d. h. h.	in.
Barom.	Highest,	6. 6 to 10,	30·487.
„	Lowest,	14. 0,	28·540.
„	Mean for the month, being 0^{in}·110 below the average.		29·567,
			°
Temp.	Highest on the 28th,		54·8.
„	Lowest on the 6th,		25·2.
„	Mean for the month, being 1°·8 below the average.		41·7,
„	Highest in sunshine,		64·0.
„	Lowest on grass,		20·0.

Rain fell on the 8th, 12th, 13th, 14th, 16th, 17th, 19th, 21st, 22nd, 23rd, 25th, 27th, and 30th, to the amount of 2^{in}·32, being 0^{in}·15 below the average.

Hail fell on the 30th about 6^h.

Fog on the 3rd, 7th, 9th, 10th, 11th, 15th, 16th, 18th, and 24th.

Lightning on the 17th at 7^h 30^m, and on the 24th about 8^h.

Solar halos on the 6th at 21^h 30^m, on the 7th at 3^h, on the 11th at 23^h, and on the 22nd at 22^h 40^m.

Lunar halos on the 7th, 6^h to 9^h 30^m.

Dead calm on the 3rd at 22^h.

DECEMBER, 1864.

		d. h. h.	in.
Barom.	Highest,	23. 20 to 22,	30·388.
„	Lowest,	12. 0 to 2,	29·223.
„	Mean for the month, being 0^{in}·102 above the average.		29·809,
			°
Temp.	Highest on the 5th,		52·8.
„	Lowest on the 17th,		20·4.
„	Mean for the month, being 0°·6 below the average.		38·7,
„	Highest in sunshine,		59·2.
„	Lowest on grass,		16·0.

Rain fell on the 3rd, 5th, 6th, 7th, 8th, 11th, 12th, 19th, and 30th, to the amount of 0^{in}·37, being 1^{in}·86 below the average.

Snow fell on the 16th, 17th, 18th, 19th, and 31st.

Fog on the 1st, 8th, 19th, 26th, and 28th.

Lunar halos on the 7th 7^h to 9^h, and on the 9th 7^h to 11^h.

Dead calm on the 26th at 22^h.

The Table used in obtaining the difference from "average" is given in *Rad. Obs.* vol. xvi. p. [51].

DIURNAL INEQUALITIES

OF

MEAN MONTHLY METEOROLOGICAL ELEMENTS,

DEDUCED FROM THE

TWO-HOURLY INDICATIONS OF THE PHOTOGRAPHIC REGISTERS;

CHANGES AND INFLUENCE OF THE WIND;

QUANTITY OF RAIN;

&c., &c.,

AS OBSERVED

AT THE RADCLIFFE OBSERVATORY, OXFORD,

IN THE YEAR

1864.

BAROGRAPHIC RESULTS.

TABLE I.

Mean Monthly Heights of the Barometer for every Two Hours, 1864.

Month.	0^h	2^h	4^h	6^h	8^h	10^h	12^h	14^h	16^h	18^h	20^h	22^h	Means.
	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
January ...	29·987	·975	·987	·995	1·001	·999	·994	·990	·985	·983	1·000	1·018	29·993
February	„ ·719	·705	·713	·729	0·739	·738	·738	·730	·718	·715	0·724	0·724	„ ·724
March ...	„ ·464	·455	·446	·459	·471	·476	·475	·465	·455	·455	·461	·466	„ ·462
April	„ ·878	·864	·852	·857	·873	·883	·888	·884	·881	·893	·902	·904	„ ·880
May	„ ·805	·795	·784	·777	·793	·801	·795	·786	·780	·788	·790	·788	„ ·790
June	„ ·743	·739	·735	·734	·744	·752	·747	·741	·741	·754	·761	·759	„ ·746
July	„ ·811	·803	·793	·792	·809	·820	·821	·820	·820	·827	·832	·829	„ ·815
August ...	„ ·885	·875	·869	·865	·881	·889	·894	·894	·892	·900	·906	·905	„ ·888
September	„ ·714	·707	·707	·717	·725	·721	·714	·707	·704	·714	·727	·730	„ ·716
October ...	„ ·643	·629	·626	·640	·647	·651	·647	·638	·635	·637	·653	·658	„ ·642
November	„ ·561	·553	·557	·568	·572	·574	·573	·568	·565	·565	·572	·576	„ ·567
December	„ ·803	·799	·806	·816	·821	·819	·812	·811	·800	·797	·806	·816	„ ·809
Means ...	29·751	·742	·740	·746	·756	·760	·758	·753	·748	·752	·761	·764	29·753

The Tables of "Mean Monthly Results" in this section are formed from the days in each month in which the two-hourly records are complete, no imperfect days being used; while in the preceding section use has been made, for those days, of the three ordinary readings of the Barometer at 10^h A.M., 2^h P.M., and 10^h P.M., the correction due for Diurnal Inequality being applied to the mean of the three readings, to reduce to the mean for the day, and also the correction for the monthly observed difference between the readings of the Barometer and of the Barograph. This will account for some slight differences in the monthly means.

Supposing the general expression for the height of the Barometer at the hour $\frac{x}{15}$ after noon to be represented by the usual formula,

$$\beta_x = \beta + a \operatorname{Sin}(x + A) + b \operatorname{Sin}(2x + B) + c \operatorname{Sin}(3x + C) + \&c.,$$

then the following Table gives the values of the constants β, a, b, c, A, B, C, derived from the solution of the equations formed by the substitution of the mean monthly indications of the Barograph for every two hours in the general expression.

TABLE II.

Values of the Constants in the Periodical Expression for the Mean Monthly Diurnal Inequalities of Barographic Results, for the Year 1864.

Month.	β	a	b	c	A	B	C
	in.	in.	in.	in.	°	°	°
January	29·993	0·002	0·012	0·008	259	173	190
February	„ ·724	·011	·009	·004	286	164	178
March	„ ·462	·006	·011	·001	277	139	117
April	„ ·880	·018	·013	·002	185	157	243
May	„ ·790	·001	·009	·006	49	116	15
June	„ ·746	·008	·009	·003	172	172	306
July	„ ·815	·015	·009	·002	192	155	326
August	„ ·888	·016	·008	·002	187	153	270
September ...	„ ·716	·002	·011	·002	95	182	203
October	„ ·642	·003	·012	·003	204	163	183
November ...	„ ·567	·005	·007	·003	244	175	181
December ...	„ ·809	0·007	0·007	0·005	320	168	180

Substituting for x, (the hour-angle from mean noon, expressed in degrees,) the values 0°, 15°, 30°, 45°,...315°, and 345°, we obtain the following Table, which gives the hourly values of the Diurnal Inequalities for each Month.

TABLE III.

***Excess of the Mean Monthly Result of the Barograph at each Hour, above the Mean Monthly Result for the Day, for the Year* 1864.**

Hour.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
h.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
0	— ·003	— ·009	+ ·002	+ ·001	+ ·011	·000	·000	·000	+ ·001	+ ·003	— ·003	— ·004
1	— ·014	— ·014	— ·004	— ·010	+ ·011	— ·004	— ·008	— ·007	— ·006	— ·007	— ·010	— ·009
2	— ·020	— ·018	— ·009	— ·019	+ ·008	— ·008	— ·013	— ·014	— ·010	— ·013	— ·014	— ·011
3	— ·019	— ·017	— ·013	— ·025	·000	— ·011	— ·018	— ·019	— ·011	— ·016	— ·014	— ·010
4	— ·010	— ·012	— ·014	— ·027	— ·008	— ·012	— ·022	— ·021	— ·007	— ·015	— ·010	— ·005
5	— ·001	— ·003	— ·011	— ·026	— ·013	— ·013	— ·022	— ·022	— ·003	— ·010	— ·005	+ ·003
6	+ ·007	+ ·005	— ·006	— ·022	— ·013	— ·011	— ·021	— ·020	+ ·002	— ·004	·000	+ ·009
7	+ ·010	+ ·011	+ ·001	— ·016	— ·008	— ·008	— ·014	— ·016	+ ·006	+ ·003	+ ·004	+ ·012
8	+ ·007	+ ·014	+ ·009	— ·009	+ ·001	— ·002	— ·007	— ·011	+ ·008	+ ·006	+ ·006	+ ·012
9	+ ·006	+ ·016	+ ·013	— ·002	+ ·009	+ ·003	·000	— ·004	+ ·007	+ ·008	+ ·007	+ ·010
10	+ ·005	+ ·016	+ ·017	+ ·004	+ ·013	+ ·005	+ ·006	+ ·002	+ ·005	+ ·009	+ ·006	+ ·009
11	+ ·004	+ ·014	+ ·015	+ ·008	+ ·011	+ ·006	+ ·008	+ ·006	+ ·002	+ ·007	+ ·006	+ ·007
12	+ ·005	+ ·013	+ ·012	+ ·009	+ ·005	+ ·002	+ ·008	+ ·008	— ·001	+ ·005	+ ·005	+ ·006
13	+ ·004	+ ·010	+ ·008	+ ·006	— ·001	— ·002	+ ·006	+ ·007	— ·006	+ ·001	+ ·004	+ ·005
14	·000	+ ·006	+ ·001	+ ·003	— ·006	— ·006	+ ·003	+ ·006	— ·010	— ·003	+ ·002	+ ·001
15	— ·005	— ·001	— ·003	+ ·001	— ·008	— ·007	+ ·002	+ ·005	— ·011	— ·006	·000	— ·004
16	— ·012	— ·006	— ·008	+ ·001	— ·006	— ·004	+ ·004	+ ·005	— ·011	— ·009	— ·002	— ·009
17	— ·013	— ·009	— ·009	+ ·006	— ·005	+ ·001	+ ·008	+ ·008	— ·007	— ·008	— ·003	— ·013
18	— ·009	— ·009	— ·008	+ ·012	— ·003	+ ·009	+ ·013	+ ·012	— ·002	— ·004	— ·002	— ·011
19	·000	— ·007	— ·005	+ ·020	— ·002	+ ·014	+ ·016	+ ·016	+ ·006	+ ·003	+ ·002	— ·008
20	+ ·011	— ·002	— ·001	+ ·025	— ·003	+ ·016	+ ·017	+ ·019	+ ·012	+ ·010	+ ·006	— ·002
21	+ ·018	+ ·002	+ ·003	+ ·026	— ·001	+ ·015	+ ·016	+ ·018	+ ·015	+ ·014	+ ·007	+ ·004
22	+ ·017	+ ·002	+ ·005	+ ·022	+ ·001	+ ·011	+ ·012	+ ·014	+ ·013	+ ·015	+ ·006	+ ·005
23	+ ·010	— ·002	+ ·005	+ ·012	+ ·007	+ ·006	+ ·006	+ ·008	+ ·008	+ ·011	+ ·002	+ ·003

THERMOGRAPHIC RESULTS.

TABLE IV.

Mean Monthly Temperature of the Air for every Two Hours, 1864.

Month.	0^h	2^h	4^h	6^h	8^h	10^h	12^h	14^h	16^h	18^h	20^h	22^h	Means.
	°	°	°	°	°	°	°	°	°	°	°	°	°
January ...	41·7	42·4	41·5	40·3	39·5	39·3	39·3	39·2	38·8	38·4	38·0	39·3	39·8
February	39·3	40·8	40·0	37·5	36·5	36·1	35·2	34·7	34·8	34·6	34·7	36·9	36·8
March ...	45·6	46·8	46·4	43·6	41·3	39·3	38·4	37·1	36·8	36·6	38·9	42·9	41·2
April	53·8	55·7	55·9	54·0	49·3	46·2	44·3	42·8	41·8	42·4	46·8	51·0	48·7
May	60·7	62·6	62·4	60·7	55·7	51·8	50·3	48·8	48·2	50·2	53·9	57·8	55·3
June	64·6	66·1	64·6	62·1	57·6	54·8	53·3	52·0	51·8	55·6	58·7	61·9	58·6
July	67·6	70·0	69·5	67·1	61·7	57·8	54·8	53·0	51·9	55·4	59·3	63·7	61·1
August ...	65·1	66·9	67·0	64·7	59·5	56·0	53·4	51·1	49·5	50·2	55·9	61·6	58·4
September	62·7	63·3	63·2	59·8	56·4	54·7	53·7	53·2	52·9	52·3	54·5	58·2	57·1
October ...	54·5	54·9	54·0	51·2	49·9	48·8	47·7	47·3	47·1	46·7	48·2	51·9	50·2
November	45·8	46·4	45·5	43·6	42·2	41·1	39·9	39·9	39·5	39·7	40·0	43·0	42·2
December	40·4	41·1	40·2	39·4	39·4	39·2	38·8	38·8	38·2	38·0	38·1	38·8	39·2
Means ...	53·48	54·75	54·18	52·00	49·08	47·09	45·76	44·83	44·28	45·01	47·25	50·58	49·00

The same remark is applicable to this Table as to Table I; namely, that the mean results are not quite identical with those in the preceding section.

If

$$T_x = T + a \operatorname{Sin}(x + A) + b \operatorname{Sin}(2x + B) + c \operatorname{Sin}(3x + C) + \&c.$$

represent the mean monthly temperature of the air for any hour $\frac{x}{15}$ after mean noon, then, as before, we find the following values for the constants.

TABLE V.

Values of the Constants in the Periodical Expression for the Mean Monthly Diurnal Inequalities of Thermographic Results, for the Year 1864.

Month.	*T*	*a*	*b*	*c*	*A*	*B*	*C*
	°	°	°	°	°	°	°
January	39·8	1·53	1·02	0·30	39	35	43
February	36·8	2·65	1·07	0·42	48	35	16
March	41·2	5·05	1·23	0·15	48	57	180
April	48·7	6·43	0·61	0·68	46	47	211
May	55·3	7·34	0·41	0·56	50	12	217
June	58·6	6·96	0·30	0·44	61	44	281
July	61·1	8·84	0·31	0·25	49	30	247
August	58·4	8·85	0·94	0·81	44	77	207
September ...	57·1	5·47	1·57	0·18	49	36	146
October	50·2	3·91	1·22	0·27	53	58	90
November ...	42·2	3·35	0·98	0·37	49	43	72
December ...	39·2	1·12	0·62	0·27	33	49	35

Substituting for x, the values 0°, 15°, 30°,...315°, and 345°, we obtain the following Table, which gives the hourly values of the Diurnal Inequalities for each Month.

TABLE VI.

Excess of the Mean Monthly Temperature of the Air at each Hour, above the Mean Monthly Temperature for the Day, for the Year 1864.

Hour.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
h.	°	°	°	°	°	°	°	°	°	°	°	°
0	+ 1·7	+ 2·7	+ 4·8	+ 4·7	+ 5·4	+ 5·9	+ 6·6	+ 6·7	+ 5·2	+ 4·4	+ 3·6	+ 1·2
1	+ 2·5	+ 3·7	+ 5·6	+ 5·6	+ 6·4	+ 6·8	+ 8·0	+ 7·7	+ 6·3	+ 5·0	+ 4·3	+ 1·7
2	+ 2·7	+ 4·1	+ 5·9	+ 6·2	+ 7·2	+ 7·3	+ 8·9	+ 8·4	+ 6·8	+ 5·0	+ 4·4	+ 1·8
3	+ 2·4	+ 3·7	+ 5·6	+ 6·7	+ 7·6	+ 7·3	+ 9·2	+ 8·8	+ 6·6	+ 4·3	+ 3·9	+ 1·6
4	+ 1·7	+ 2·9	+ 4·9	+ 6·7	+ 7·5	+ 6·5	+ 8·8	+ 8·7	+ 5·7	+ 3·4	+ 3·1	+ 1·1
5	+ 1·0	+ 1·8	+ 3·6	+ 6·0	+ 6·7	+ 5·0	+ 7·6	+ 7·8	+ 4·4	+ 2·3	+ 2·2	+ 0·6
6	+ 0·4	+ 0·8	+ 2·5	+ 4·6	+ 5·1	+ 3·1	+ 5·7	+ 6·2	+ 2·8	+ 1·3	+ 1·4	+ 0·3
7	0·0	0·0	+ 1·2	+ 2·7	+ 2·9	+ 1·0	+ 3·5	+ 3·9	+ 1·2	+ 0·4	+ 0·7	+ 0·1
8	− 0·3	− 0·4	− 0·1	+ 0·6	+ 0·5	− 0·8	+ 1·2	+ 1·4	− 0·4	− 0·3	0·0	+ 0·1
9	− 0·4	− 0·7	− 1·0	− 1·2	− 1·6	− 2·4	− 1·1	− 0·8	− 1·7	− 1·0	− 0·6	+ 0·1
10	− 0·5	− 0·9	− 1·8	− 2·5	− 3·3	− 3·6	− 3·1	− 2·6	− 2·6	− 1·6	− 1·3	0·0
11	− 0·5	− 1·2	− 2·3	− 3·3	− 4·4	− 4·6	− 4·9	− 3·9	− 3·1	− 2·0	− 1·8	− 0·1
12	− 0·6	− 1·5	− 2·7	− 3·8	− 5·2	− 5·5	− 6·3	− 4·9	− 3·3	− 2·4	− 2·2	− 0·3
13	− 0·6	− 1·8	− 3·2	− 4·4	− 5·8	− 6·2	− 7·5	− 5·9	− 3·5	− 2·6	− 2·4	− 0·5
14	− 0·6	− 1·9	− 3·7	− 5·1	− 6·4	− 6·8	− 8·3	− 7·1	− 3·7	− 2·8	− 2·5	− 0·6
15	− 0·7	− 2·0	− 4·3	− 5·9	− 6·8	− 6·8	− 8·6	− 8·4	− 4·0	− 3·0	− 2·5	− 0·7
16	− 0·9	− 2·0	− 4·7	− 6·4	− 6·9	− 6·3	− 8·4	− 9·2	− 4·4	− 3·3	− 2·5	− 0·9
17	− 1·2	− 1·9	− 4·9	− 6·4	− 6·4	− 5·2	− 7·6	− 9·2	− 4·7	− 3·5	− 2·7	− 1·0
18	− 1·6	− 2·0	− 4·6	− 5·5	− 5·3	− 3·5	− 6·1	− 8·0	− 4·7	− 3·4	− 2·8	− 1·2
19	− 1·8	− 2·0	− 3·6	− 3·9	− 3·5	− 1·6	− 4·1	− 5·7	− 4·0	− 2·9	− 2·5	− 1·3
20	− 1·8	− 1·7	− 2·2	− 1·8	− 2·0	+ 0·3	− 1·8	− 2·7	− 2·7	− 1·8	− 1·9	− 1·3
21	− 1·3	− 1·1	− 0·3	+ 0·4	+ 0·8	+ 2·0	+ 0·6	+ 0·4	− 0·9	− 0·3	− 0·8	− 0·9
22	− 0·4	0·0	+ 1·7	+ 2·2	+ 2·7	+ 3·4	+ 2·8	+ 3·1	+ 1·3	+ 1·5	+ 0·7	− 0·3
23	+ 0·7	+ 1·3	+ 3·4	+ 3·7	+ 4·2	+ 4·7	+ 4·9	+ 5·2	+ 3·4	+ 3·2	+ 2·3	+ 0·5

Representing by the same general expression as before (page [38]) the mean monthly temperature of evaporation at any hour, we find the following values of the constants.

TABLE VIII.

Values of the Constants in the Periodical Expression for the Mean Monthly Diurnal Inequalities of the Temperature of Evaporation, for the Year 1864.

Month.	T	a	b	c	A	B	C
	°	°	°	°	°	°	°
January	38·7	1·11	0·72	0·22	29	30	36
February	35·6	2·11	0·84	0·30	51	43	43
March	38·9	3·54	0·71	0·19	50	58	128
April	45·5	4·98	0·42	0·39	43	74	211
May	52·0	3·95	0·58	0·28	50	86	197
June	53·6	2·85	0·13	0·32	59	83	279
July	55·4	4·57	0·31	0·26	42	142	212
August	53·5	4·94	0·51	0·40	38	172	194
September ...	55·0	4·00	1·20	0·18	41	33	107
October	47·0	2·41	0·89	0·19	50	65	110
November ...	40·5	2·73	0·79	0·33	47	49	60
December ...	38·2	0·89	0·46	0·19	26	41	52

Substituting for x the values 0°, 15°, 30°,...315°, and 345°, we obtain the following Table, which gives the hourly values of the Diurnal Inequalities of the Temperature of Evaporation for each Month.

HYGROGRAPHIC RESULTS.

TABLE VII.

Mean Monthly Temperatures of Evaporation, for every Two Hours, 1864.

Month.	0^h	2^h	4^h	6^h	8^h	10^h	12^h	14^h	16^h	18^h	20^h	22^h	Means.
	°	°	°	°	°	°	°	°	°	°	°	°	°
January ...	39·9	40·4	40·0	39·2	38·6	38·5	38·4	38·3	37·9	37·7	37·2	38·0	38·7
February	38·0	38·6	37·7	36·1	35·3	34·7	34·4	34·0	34·1	34·0	34·1	35·9	35·6
March ...	42·4	42·7	42·2	40·6	39·0	37·5	36·7	36·0	35·8	35·9	37·4	40·2	38·9
April	49·0	50·1	50·9	48·3	46·9	43·9	42·5	41·4	40·5	40·8	44·2	47·1	45·5
May	55·4	55·9	55·7	54·4	52·5	50·5	49·4	48·7	48·1	48·8	51·4	53·7	52·0
June	55·6	56·5	56·5	54·6	53·4	52·2	51·5	50·9	50·4	52·4	53·3	55·3	53·6
July	58·5	59·5	59·7	58·7	57·1	54·4	52·7	51·3	50·4	51·5	54·4	56·7	55·4
August ...	57·0	57·9	58·2	57·3	55·2	52·7	51·2	49·5	48·3	48·6	51·7	54·8	53·5
September	58·6	59·7	59·3	57·5	54·9	53·8	52·7	52·4	51·8	51·3	52·3	55·2	55·0
October ...	49·6	50·0	49·1	47·7	46·8	46·3	45·7	45·3	45·0	44·5	45·5	48·2	47·0
November	43·4	44·0	43·1	41·6	40·6	39·9	38·7	38·6	38·2	38·4	38·7	41·1	40·5
December	39·2	39·5	39·1	38·6	38·5	38·2	38·0	37·9	37·6	37·2	37·3	37·7	38·2
Means ...	48·88	49·57	49·29	47·88	46·57	45·22	44·33	43·69	43·18	43·43	44·80	46·99	46·15

The same remark is applicable to this Table as to Tables I and IV; namely, that the mean results are not quite identical with those given in the preceding section.

Representing by the same general expression as before (page [38]) the mean monthly temperature of evaporation at any hour, we find the following values of the constants.

TABLE VIII.

Values of the Constants in the Periodical Expression for the Mean Monthly Diurnal Inequalities of the Temperature of Evaporation, for the Year 1864.

Month.	T	a	b	c	A	B	C
	°	°	°	°	°	°	°
January	38·7	1·11	0·72	0·22	29	30	36
February	35·6	2·11	0·84	0·30	51	43	43
March	38·9	3·54	0·71	0·19	50	58	128
April	45·5	4·98	0·42	0·39	43	74	211
May	52·0	3·95	0·58	0·28	50	86	197
June	53·6	2·85	0·13	0·32	59	83	279
July	55·4	4·57	0·31	0·26	42	142	212
August	53·5	4·94	0·51	0·40	38	172	194
September ...	55·0	4·00	1·20	0·18	41	33	107
October	47·0	2·41	0·89	0·19	50	65	110
November ...	40·5	2·73	0·79	0·33	47	49	60
December ...	38·2	0·89	0·46	0·19	26	41	52

Substituting for x the values 0°, 15°, 30°,...315°, and 345°, we obtain the following Table, which gives the hourly values of the Diurnal Inequalities of the Temperature of Evaporation for each Month.

TABLE IX.

***Excess of the Mean Monthly Temperature of Evaporation at each Hour, above the Mean Monthly Temperature for the Day, for the Year* 1864.**

Hour.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
h.	°	°	°	°	°	°	°	°	°	°	°	°
0	+ 1·0	+ 2·4	+ 3·5	+ 3·6	+ 3·5	+ 2·3	+ 3·1	+ 3·0	+ 3·4	+ 2·8	+ 2·9	+ 0·8
1	+ 1·6	+ 3·0	+ 3·9	+ 4·3	+ 3·9	+ 2·7	+ 3·6	+ 3·4	+ 4·5	+ 3·2	+ 3·5	+ 1·2
2	+ 1·9	+ 3·1	+ 4·0	+ 4·7	+ 3·9	+ 3·0	+ 4·0	+ 3·8	+ 4·9	+ 3·0	+ 3·6	+ 1·3
3	+ 1·7	+ 2·7	+ 3·7	+ 5·0	+ 3·8	+ 3·0	+ 4·3	+ 4·2	+ 4·8	+ 2·6	+ 3·2	+ 1·2
4	+ 1·3	+ 2·0	+ 3·2	+ 5·0	+ 3·5	+ 2·8	+ 4·3	+ 4·5	+ 4·3	+ 2·0	+ 2·5	+ 0·9
5	+ 0·9	+ 1·2	+ 2·6	+ 4·5	+ 3·0	+ 2·1	+ 4·0	+ 4·6	+ 3·5	+ 1·4	+ 1·7	+ 0·6
6	+ 0·4	+ 0·5	+ 1·8	+ 3·6	+ 2·2	+ 1·3	+ 3·4	+ 4·2	+ 2·4	+ 0·8	+ 1·1	+ 0·4
7	+ 0·2	+ 0·1	+ 1·0	+ 2·3	+ 1·3	+ 0·4	+ 2·5	+ 3·4	+ 1·3	+ 0·3	+ 0·6	+ 0·3
8	0·0	— 0·3	+ 0·1	+ 1·0	+ 0·3	— 0·4	+ 1·4	+ 2·2	+ 0·3	— 0·1	+ 0·1	+ 0·2
9	— 0·1	— 0·5	— 0·7	— 0·3	— 0·6	— 0·9	+ 0·2	+ 0·8	— 0·7	— 0·5	— 0·3	+ 0·1
10	— 0·2	— 0·8	— 1·4	— 1·4	— 1·4	— 1·3	— 0·9	— 0·6	— 1·4	— 0·8	— 0·8	0·0
11	— 0·2	— 1·0	— 1·9	— 2·1	— 1·9	— 1·6	— 1·8	— 1·8	— 1·9	— 1·0	— 1·3	— 0·1
12	— 0·3	— 1·3	— 2·3	— 2·8	— 2·4	— 2·0	— 2·7	— 2·9	— 2·1	— 1·2	— 1·7	— 0·2
13	— 0·4	— 1·4	— 2·5	— 3·4	— 2·8	— 2·4	— 3·5	— 3·8	— 2·3	— 1·4	— 2·0	— 0·3
14	— 0·4	— 1·5	— 2·7	— 4·1	— 3·3	— 2·8	— 4·3	— 4·6	— 2·5	— 1·6	— 2·1	— 0·4
15	— 0·5	— 1·5	— 3·0	— 4·8	— 3·8	— 3·0	— 4·7	— 5·2	— 2·8	— 1·9	— 2·1	— 0·5
16	— 0·6	— 1·5	— 3·2	— 5·2	— 4·0	— 2·9	— 4·9	— 5·5	— 3·2	— 2·2	— 2·2	— 0·6
17	— 0·9	— 1·6	— 3·2	— 5·1	— 4·0	— 2·3	— 4·6	— 5·2	— 3·6	— 2·4	— 2·3	— 0·8
18	— 1·2	— 1·7	— 3·0	— 4·4	— 3·4	— 1·6	— 3·8	— 4·4	— 3·7	— 2·4	— 2·3	— 1·0
19	— 1·4	— 1·7	— 2·4	— 3·1	— 2·3	— 0·6	— 2·6	— 3·0	— 3·5	— 2·1	— 2·2	— 1·1
20	— 1·4	— 1·4	— 1·4	— 1·6	— 0·9	+ 0·2	— 1·2	— 1·4	— 2·7	— 1·3	— 1·7	— 1·1
21	— 1·2	— 0·7	— 0·1	+ 0·1	+ 0·6	+ 0·9	+ 0·3	+ 0·2	— 1·4	— 0·3	— 0·7	— 0·8
22	— 0·6	+ 0·3	+ 1·3	+ 1·6	+ 1·9	+ 1·4	+ 1·5	+ 1·6	+ 0·3	+ 1·0	+ 0·5	— 0·3
23	+ 0·2	+ 1·4	+ 2·6	+ 2·7	+ 2·9	+ 1·8	+ 2·4	+ 2·4	+ 2·0	+ 2·1	+ 1·8	+ 0·3

TABLE X.

Mean Monthly Elasticity of Vapour for every Two Hours, 1864.

Month.	0^h	2^h	4^h	6^h	8^h	10^h	12^h	14^h	16^h	18^h	20^h	22^h	Means.
	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
January ...	0·226	·229	·230	·227	·226	·225	·223	·222	·218	·218	·212	·215	0·223
February	·215	·210	·202	·197	·193	·187	·190	·188	·188	·189	·190	·200	·196
March ...	·236	·229	·225	·220	·213	·206	·199	·199	·198	·203	·208	·220	·213
April	·290	·299	·316	·273	·292	·261	·251	·244	·237	·237	·259	·278	·270
May	·372	·363	·361	·347	·355	·351	·341	·343	·335	·327	·346	·361	·350
June	·337	·344	·358	·336	·356	·356	·357	·358	·348	·354	·341	·356	·350
July	·379	·380	·390	·388	·405	·379	·370	·355	·346	·334	·361	·372	·372
August ...	·365	·371	·377	·377	·380	·358	·347	·335	·324	·322	·334	·346	·353
September	·435	·461	·450	·441	·410	·402	·384	·383	·370	·365	·363	·396	·405
October ...	·297	·303	·290	·288	·283	·285	·282	·278	·274	·268	·272	·293	·284
November	·254	·260	·250	·240	·235	·232	·221	·219	·217	·218	·220	·236	·234
December	·226	·224	·226	·226	·224	·220	·220	·218	·218	·212	·213	·214	·220
Means ...	0·303	·306	·306	·297	·298	·289	·282	·279	·273	·271	·277	·291	0·289

The means of the numbers under the different hours may be represented pretty accurately by the formula—

$$E_x = 0{\cdot}289 + 0{\cdot}017 \text{ Sin } (x + 31^\circ 9') + 0{\cdot}004 \text{ Sin } (2x + 68^\circ 37') + 0{\cdot}0017 \text{ Sin } (3x + 95^\circ 42').$$

Subtracting the values of the Elasticity of Vapour given above from the corresponding numbers in Table I, we obtain the numbers in the following Table.

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TABLE I.

Mean Monthly Elasticity of Vapour [illegible]

Month.	0h	2h	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	in.	in.	in.	in.	in.								
January ..	0·226	·229	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
February	·215	·210	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
March ..	·236	·229	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
April	[illegible]	[illegible]	·316	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
May	·372	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
June	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
July	·379	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
August .	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
September	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
October	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
November	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
December	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Means ..	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]						

The mean [illegible]
sented [illegible]

[illegible]

Subtracting [illegible]
from the [illegible]
in the following [illegible]

TABLE XI.

Mean Monthly Pressure of Dry Air, for every Two Hours, 1864.

Month.	0^h	2^h	4^h	6^h	8^h	10^h	12^h	14^h	16^h	18^h	20^h	22^h	Means.
	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
January ...	29·761	·746	·757	·768	·775	·774	·771	·768	·767	·765	·788	·803	29·770
February	·504	·495	·511	·532	·546	·551	·548	·542	·530	·526	·534	·524	·529
March ...	·228	·226	·221	·239	·258	·270	·276	·266	·257	·252	·253	·246	·249
April	·588	·565	·536	·584	·581	·622	·637	·640	·644	·656	·643	·626	·610
May	·433	·432	·423	·430	·438	·450	·454	·443	·445	·461	·444	·427	·440
June	·406	·395	·377	·398	·388	·396	·390	·383	·393	·400	·420	·403	·396
July	·432	·423	·403	·404	·404	·441	·451	·465	·474	·493	·471	·457	·443
August ...	·520	·504	·492	·488	·501	·531	·547	·559	·568	·578	·572	·559	·535
September	·279	·246	·257	·276	·315	·319	·330	·324	·334	·349	·364	·334	·311
October ...	·346	·326	·336	·352	·364	·366	·365	·360	·361	·369	·381	·365	·358
November	·307	·293	·307	·328	·337	·342	·352	·349	·348	·347	·352	·340	·333
December	·577	·575	·580	·590	·597	·599	·592	·593	·582	·585	·593	·602	·589
Means ...	29·448	·436	·433	·449	·459	·472	·476	·474	·475	·482	·485	·474	29·464

And the means under the different hours may be represented as usual by the formula—

$$P_x = 29{\cdot}464 + 0{\cdot}023 \operatorname{Sin}(x + 209^\circ\ 23') + 0{\cdot}010 \operatorname{Sin}(2x + 184^\circ\ 58') + 0{\cdot}002 \operatorname{Sin}(3x + 239^\circ\ 45').$$

TABLE XII.

Mean Monthly Directions of the Wind for every Two Hours, derived from the Indications of the Anemograph, 1864.

Month.	Directions at Bi-Horary Periods.											
	0^h	2^h	4^h	6^h	8^h	10^h	12^h	14^h	16^h	18^h	20^h	22^h
	°	°	°	°	°	°	°	°	°	°	°	°
January	181	181	176	180	177	173	173	172	182	174	176	182
February ...	219	243	252	222	214	211	223	198	225	198	216	232
March	225	236	218	209	190	208	205	218	215	216	225	218
April	190	195	245	278	291	306	294	266	318	328	337	68
May	328	311	302	344	286	244	236	264	273	289	302	325
June	200	200	202	196	201	199	196	199	200	209	213	212
July	219	218	217	239	233	203	257	295	274	227	247	228
August	296	279	272	252	257	263	237	236	264	276	268	310
September ...	200	203	202	194	179	181	182	186	194	187	198	197
October	62	56	28	41	57	78	67	9	14	26	43	58
November ...	174	185	180	172	179	179	177	181	175	177	167	169
December ...	112	88	76	106	108	115	104	101	74	83	94	104
Means	206	211	208	200	189	187	189	196	202	198	206	201

TABLE XIII.

Mean Bi-Horary Velocities of the Wind for each Month, estimated in the Directions given in the preceding Table, 1864.

Month.	Velocities in the Bi-Horary Intervals.											
	0^h–2^h	2^h–4^h	4^h–6^h	6^h–8^h	8^h–10^h	10^h–12^h	12^h–14^h	14^h–16^h	16^h–18^h	18^h–20^h	20^h–22^h	22^h–0^h
	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
January...	16·7	13·9	13·3	12·1	13·5	15·5	17·4	15·3	14·5	13·2	15·0	18·6
February	15·3	16·0	12·6	11·6	13·5	12·8	10·8	13·1	10·9	8·1	9·2	13·0
March ...	22·1	22·4	17·0	15·9	14·5	12·9	13·3	12·3	14·1	13·6	15·4	18·3
April......	10·0	12·2	8·7	7·8	8·5	7·8	6·2	7·2	7·9	8·4	7·9	3·6
May	13·2	10·5	8·7	8·5	5·0	4·3	6·3	8·4	8·3	10·2	12·1	13·7
June	23·7	25·7	23·9	24·8	17·4	18·0	18·4	15·5	15·4	16·7	19·6	20·2
July	14·4	12·8	13·1	10·4	10·4	12·4	9·2	7·9	7·3	9·2	12·2	12·7
August ...	13·6	14·9	12·8	9·7	9·6	9·5	9·6	7·8	7·5	7·8	11·0	12·0
September	24·9	25·0	23·1	18·7	18·9	19·7	18·0	16·9	15·4	16·2	20·1	22·9
October...	12·0	13·8	12·6	12·1	11·7	10·7	10·0	7·6	8·5	6·5	10·1	10·3
November	19·0	18·2	17·0	15·2	15·5	15·5	13·8	15·4	15·2	16·1	19·6	20·0
December	13·0	11·7	11·4	12·3	12·5	13·0	11·9	10·0	10·8	12·6	10·9	13·5
Means ...	13·9	14·3	12·9	10·8	11·0	11·7	11·2	10·5	9·5	9·6	11·3	12·6

TABLE XIV.

Actual Mean Monthly Bi-Horary Velocities of the Wind in 1864.

Month.	Velocities in the Bi-Horary Intervals.												Means.
	h. h. 0—2	h. h. 2—4	h. h. 4—6	h. h. 6—8	h. h. 8—10	h. h. 10–12	h. h. 12–14	h. h. 14–16	h. h. 16–18	h. h. 18–20	h. h. 20–22	h. h. 22—0	
	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
January	20·6	19·0	16·9	14·4	15·1	17·5	18·7	17·7	16·5	18·0	17·5	20·8	17·73
February	27·8	29·4	22·9	19·1	20·0	21·1	21·1	21·3	20·6	18·7	20·2	26·6	22·40
March	31·4	31·8	27·2	25·6	24·3	21·3	21·0	21·4	21·7	22·4	27·1	31·7	25·58
April	18·1	19·4	19·4	15·8	15·6	15·1	14·7	14·1	14·2	15·5	18·1	18·2	16·52
May	19·6	20·0	19·1	16·1	14·3	13·5	12·5	13·1	13·1	15·4	18·3	19·8	16·23
June	26·1	27·2	26·1	22·4	19·4	19·9	19·2	17·5	16·9	19·3	23·3	24·2	21·79
July	23·0	22·9	23·9	20·2	17·1	16·9	16·5	13·4	14·4	16·5	21·7	22·2	19·06
August	18·7	20·8	18·2	16·4	14·3	13·6	12·5	11·6	12·0	13·0	16·4	18·5	15·50
September	25·4	26·4	23·7	19·5	19·1	18·3	16·2	16·3	15·2	15·4	21·7	24·1	20·11
October	25·5	26·0	21·6	20·9	20·1	18·5	17·8	17·1	17·1	16·7	22·1	24·9	20·69
November	25·4	23·6	21·0	20·5	17·7	18·1	17·9	18·4	17·6	16·9	19·2	23·1	19·95
December	20·3	20·2	18·9	18·9	19·3	18·6	18·4	17·9	17·4	18·3	18·2	20·5	18·91
Means of Velocities.	23·49	23·89	21·58	19·15	18·03	17·70	17·21	16·65	16·39	17·18	20·32	22·88	19·54
Means of Relative Velocities.	1·202	1·223	1·105	0·980	0·923	0·906	0·881	0·852	0·839	0·879	1·040	1·171	1·000

The mean absolute and relative velocities for the whole year for any hour $\frac{x}{15}$ may be represented by the formulæ

$$V_x = 19{\cdot}54 + 3{\cdot}576 \operatorname{Sin}(x + 75^\circ 7') + 1{\cdot}113 \operatorname{Sin}(2x + 92^\circ 58') + 0{\cdot}195 \operatorname{Sin}(3x + 274^\circ 37'),$$

and

$$V_x = 1{\cdot}000 + 0{\cdot}183 \operatorname{Sin}(x + 75^\circ 7') + 0{\cdot}058 \operatorname{Sin}(2x + 92^\circ 58') + 0{\cdot}010 \operatorname{Sin}(3x + 274^\circ 37').$$

TABLE XV.

Principal Changes of the Wind during the Year 1864.

Interval of Time.	Amount of Change. Direct.	Amount of Change. Retrograde.
d. h. d. h.	°	°
Jan. 8 22 to 9 0	135	
12 14 „ 12 16	202	
13 4 „ 14 0	90	
14 18 „ 15 0	67	
18 10 „ 18 14	45	
20 14 „ 20 16	45	
20 22 „ 21 4		45
22 14 „ 22 20	45	
23 0 „ 23 4		45
23 6 „ 23 8	135	
23 10 „ 23 14		45
23 18 „ 23 22		56
25 0 „ 25 14		45
26 16 „ 26 22	45	
28 4 „ 28 10	68	
28 12 „ 28 20	68	
28 22 „ 29 2	45	
29 6 „ 29 16	67	
29 18 „ 31 22	45	
Sums	1102	236
Feb. 2 14 to 3 2	56	
3 22 „ 4 0	67	
4 2 „ 4 10		90
4 10 „ 4 12	90	
10 0 „ 10 4	56	
10 22 „ 11 8		158
11 8 „ 11 14		45
11 20 „ 12 2	68	
12 10 „ 12 14		45
13 0 „ 13 4	56	
13 4 „ 13 14		45
13 18 „ 13 20		45
13 20 „ 14 0	45	
15 18 „ 15 20	56	
16 4 „ 16 14	45	
Feb. 17 20 to 18 6	112	
18 8 „ 18 16		45
26 16 „ 27 0	45	
27 16 „ 27 18	112	
28 10 „ 28 12		124
29 0 „ 29 2	135	
29 6 „ 29 10		68
29 14 „ 29 20		90
29 20 „ 29 22	45	
Sums	988	755
Mar. 0 22 to 1 4	45	
1 16 „ 1 18		101
2 16 „ 3 12	45	
3 18 „ 3 20	90	
4 12 „ 4 16		124
5 18 „ 5 22	112	
6 22 „ 7 0	56	
7 14 „ 7 16		146
7 16 „ 7 22		67
8 22 „ 9 6		45
9 6 „ 9 12		45
9 12 „ 9 16		45
9 16 „ 9 20		67
10 18 „ 11 8	45	
15 0 „ 15 2	45	
15 2 „ 15 4	67	
15 20 „ 15 22	56	
15 22 „ 16 4	56	
17 0 „ 17 10		45
17 12 „ 17 16		56
17 18 „ 17 22	45	
18 4 „ 18 12		67
18 22 „ 19 0	90	
19 0 „ 19 2		45
19 4 „ 19 14		67

Interval of Time.	Amount of Change.	
	Direct.	Retrograde.
d. h. d. h.	°	°
Mar. 19 22 to 20 6	67	
20 22 „ 21 0		45
23 4 „ 23 10	45	
23 12 „ 23 16		90
24 0 „ 24 2	45	
24 4 „ 24 6	90	
24 16 „ 25 2	90	
25 8 „ 25 12	90	
29 8 „ 29 12		90
29 12 „ 29 22	112	
30 0 „ 30 10		67
30 10 „ 30 22		79
31 2 „ 31 10	45	
Sums	1336	1291
April 1 18 to 1 20	45	
2 6 „ 2 8		45
2 14 „ 2 18		67
2 22 „ 3 6	45	
3 12 „ 3 22	56	
4 0 „ 4 6	67	
4 8 „ 4 14	56	
4 14 „ 5 2	56	
5 2 „ 5 4		56
5 6 „ 5 16	90	
8 12 „ 8 20	67	
9 0 „ 9 4	79	
10 4 „ 10 6		79
10 8 „ 10 10		56
10 12 „ 10 14	79	
10 20 „ 11 8	67	
11 20 „ 12 4	45	
12 10 „ 12 12	79	
12 12 „ 12 18		67
12 18 „ 12 20	56	
13 18 „ 13 22	56	
14 22 „ 15 2	67	
15 2 „ 15 6	67	
15 6 „ 15 12	56	
17 8 „ 17 12		90

Interval of Time.	Amount of Change.	
	Direct.	Retrograde.
d. h. d. h.	°	°
April 18 2 to 18 10		56
20 14 „ 21 2		90
21 10 „ 21 14		45
21 22 „ 22 4	67	
22 6 „ 22 8		90
22 8 „ 22 10	79	
22 16		79
22 22 „ 23 0	67	
23 4 „ 23 16		45
25 0 „ 25 4		56
25 10 „ 25 12	146	
25 14 „ 25 16		124
28 22 „ 29 0		112
29 6 „ 29 10	90	
Sums	1582	1157
May 1 0 to 1 2		79
2 12 „ 3 0	90	
3 2 „ 3 6	56	
3 12 „ 3 14	101	
5 0 „ 5 2		56
5 4 „ 5 6	45	
6 8 „ 6 14	90	
6 14 „ 7 0	101	
7 10 „ 7 20	67	
8 2 „ 8 18		45
8 22 „ 9 8		45
9 18 „ 10 0	56	
10 4 „ 10 8		45
10 14 „ 10 22	45	
12 6 „ 12 16		45
14 0 „ 14 4		112
15 20 „ 16 0		124
17 0 „ 17 2	45	
19 2 „ 19 6		135
19 10 „ 19 12	146	
19 18 „ 20. 2	67	
20 6 „ 20 8	90	
21 10 „ 21 14		79
21 14 „ 22 0	67	

Interval of Time.	Amount of Change. Direct.	Retrograde.	Interval of Time.	Amount of Change. Direct.	Retrograde.
d. h. d. h.	°	°	d. h. d. h.	°	°
May 22 12 to 22 16		79	June 7 20 to 7 22		67
22 16 „ 22 18	79		8 10 „ 8 22		67
22 22 „ 23 0	45		9 0 „ 9 2	101	
23 0 „ 23 6	56		9 2 „ 9 6	45	
23 14 „ 24 0		45	9 12 „ 9 16		56
24 10 „ 24 12	101		10 0 „ 10 10		67
24 12 „ 24 18	90		11 20 „ 12 0	45	
24 18 „ 24 22	79		13 0 „ 13 4	45	
25 2 „ 25 4	45		13 4 „ 13 16		67
25 12 „ 25 18	45		14 12 „ 14 14	56	
26 10 „ 26 22		67	16 22 „ 17 14		45
27 14 „ 27 16	79		17 16 „ 17 20	90	
27 22 „ 28 0		79	17 22 „ 18 2		45
28 4 „ 28 6		90	18 16 „ 18 22	45	
28 8 „ 28 10	45		18 22 „ 19 14		56
28 14 „ 28 22	67		25 2 „ 25 6	67	
28 22 „ 29 0	67		25 8 „ 25 12		56
29 4 „ 29 14	45		25 16 „ 25 20	67	
29 16 „ 29 18	45		28 4 „ 28 10		56
29 18 „ 29 20	67		28 22 „ 29 6		45
29 20 „ 29 22	67		29 6 „ 29 8	45	
29 22 „ 30 0		67	29 14 „ 29 18	67	
30 20 „ 30 22	191		30 2 „ 30 14		45
			30 16 „ 30 22	45	
Sums	2279	1192	Sums	1404	1087
June 0 22 to 1 0	45		July 0 22 to 1 4		45
1 8 „ 1 10		90	1 14 „ 1 16		56
1 18 „ 2 0	67		2 6 „ 2 22	90	
2 0 „ 2 6	90		3 6 „ 3 12		45
2 8 „ 2 16		112	4 18 „ 4 22	79	
2 18 „ 2 22	56		9 6 „ 9 22	45	
3 10 „ 3 12		67	18 22 „ 19 4		112
3 22 „ 4 2	169		19 10 „ 19 12	67	
4 2 „ 4 4	90		19 22 „ 20 0		79
4 20 „ 5 2		45	25 12 „ 25 22	67	
5 12 „ 5 20	45		26 8 „ 26 10	45	
5 22 „ 6 2		45	26 18 „ 26 22		169
6 20 „ 6 22		56	27 4 „ 28 10	45	
6 22 „ 7 2	79		28 16 „ 28 20	45	
7 16 „ 7 18	45				

Interval of Time.	Amount of Change.	
	Direct.	Retrograde.
d. h. d. h.	°	°
July 28 22 to 29 12		79
30 2 „ 30 4	45	
30 12 „ 30 22		45
31 10 „ 31 22	56	
Sums	584	630
Aug. 1 18 to 1 22	56	
2 22 „ 3 2		101
3 18 „ 4 4	79	
8 8 „ 8 10	79	
8 18 „ 8 22	112	
9 0 „ 9 2	202	
9 4 „ 9 8		45
9 16 „ 10 0	90	
10 18 „ 10 22	45	
11 8 „ 11 14	45	
12 0 „ 12 4		124
12 20 „ 13 0	124	
13 2 „ 13 10	67	
13 22 „ 14 0		67
14 2 „ 14 10	90	
14 14 „ 14 18		90
16 6 „ 16 8		56
16 12 „ 16 18	79	
18 16 „ 18 22	45	
19 2 „ 19 6		67
21 20 „ 21 22	56	
23 6 „ 23 10		101
24 16 „ 24 22		112
24 22 „ 25 0	135	
25 0 „ 25 4	157	
25 8 „ 25 10	270	
26 6 „ 26 10	101	
26 20 „ 27 0	90	
29 2 „ 29 22		45
30 2 „ 30 22	45	
30 22 „ 31 0	45	
31 2 „ 31 22		45
Sums	2012	853

Interval of Time.	Amount of Change.	
	Direct.	Retrograde.
d. h. d. h.	°	°
Sept. 0 22 to 1 0	45	
1 4 „ 1 10		45
1 22 „ 2 10	45	
3 10 „ 3 22	67	
3 22 „ 4 4		67
4 6 „ 4 8		45
4 10 „ 4 16	101	
4 16 „ 5 0		56
5 0 „ 5 4	45	
5 6 „ 5 18		90
5 22 „ 6 0	45	
8 2 „ 8 8		45
8 10 „ 9 0	45	
11 20 „ 11 22	45	
12 2 „ 12 22		101
15 22 „ 16 2	45	
16 22 „ 17 2		45
18 2 „ 18 22	67	
18 22 „ 19 2		67
20 0 „ 20 8		45
20 12 „ 20 14	67	
20 22 „ 21 14		67
21 18 „ 22 2	67	
22 6 „ 22 8		45
22 8 „ 22 14	45	
22 22 „ 23 8		45
23 8 „ 23 16	45	
23 16 „ 23 18	45	
25 22 „ 26 2		45
26 2 „ 26 10		112
26 10 „ 27 0		45
27 6 „ 27 8		45
27 10 „ 27 12		45
28 2 „ 28 20		56
29 6 „ 29 12		56
29 14 „ 29 16	45	
29 18 „ 29 20	56	
30 14 „ 30 20		56
30 20 „ 30 22	45	
Sums	965	1223

Interval of Time.	Amount of Change. Direct.	Retrograde.
d. h. d. h.	°	°
Oct. 1 20 to 2 0	45	
2 12 „ 2 16		45
2 18 „ 2 20	45	
4 12 „ 5 12		45
5 22 „ 6 0	45	
6 8 „ 6 12		45
6 18 „ 6 22	67	
6 22 „ 7 0		45
8 14 „ 10 22		67
11 22 „ 12 16		45
13 16 „ 14 0	45	
14 20 „ 15 2	67	
15 6 „ 15 8	146	
15 8 „ 15 12	45	
18 0 „ 18 8		45
18 8 „ 18 14		56
18 22 „ 19 14	101	
20 2 „ 20 12		67
20 14 „ 20 18		56
21 8 „ 22 18	67	
24 4 „ 24 6		135
24 10 „ 24 12		45
26 4 „ 26 22		67
26 22 „ 27 8		45
27 8 „ 27 12		45
27 18 „ 27 22		90
28 0 „ 28 6		112
30 14 „ 31 4	45	
31 4 „ 31 12		45
31 12 „ 32 0	45	
Sums	763	1100
Nov. 1 4 to 1 16		67
1 22 „ 2 0	45	
2 0 „ 2 12		56
4 0 „ 4 4		112
4 22 „ 5 0	135	
7 16 „ 7 22		45
8 0 „ 8 4	45	
11 2 „ 11 4	79	

Interval of Time.	Amount of Change. Direct.	Retrograde.
d. h. d. h.	°	°
Nov. 11 20 to 12 0	67	
13 8 „ 13 10	67	
14 4 „ 14 12		56
14 20 „ 14 22		79
14 22 „ 15 2		67
15 2 „ 15 14		67
16 0 „ 16 8		90
16 8 „ 16 20		90
17 12 „ 17 18	45	
18 14 „ 18 16		79
20 8 „ 20 12		45
20 20 „ 20 22	101	
21 8 „ 21 12	67	
21 12 „ 21 18		45
21 22 „ 22 4	45	
22 10 „ 22 16		45
23 8 „ 23 10		90
23 10 „ 23 14		90
23 16 „ 24 2		90
24 2 „ 24 6		45
24 22 „ 25 2		45
25 6 „ 25 10	67	
27 0 „ 27 8		67
27 22 „ 28 4	45	
28 22 „ 29 6		67
29 6 „ 30 10	45	
Sums	853	1437
Dec. 2 0 to 2 4		45
5 10 „ 6 0	45	
6 4 „ 6 16		56
7 20 „ 7 22	135	
7 22 „ 8 2		56
8 2 „ 8 6		56
12 2 „ 12 4	56	
12 6 „ 12 12		45
12 12 „ 12 18		45
12 18 „ 13 2		45
13 16 „ 14 4		45
16 10 „ 16 18		67

Interval of Time.	Amount of Change. Direct.	Amount of Change. Retrograde.	Interval of Time.	Amount of Change. Direct.	Amount of Change. Retrograde.
d. h. d. h.	°	°	d. h. d. h.	°	°
Dec. 16 18 to 16 20		45	Dec. 23 20 to 23 22	45	
16 20 „ 17 0	45		26 0 „ 26 8		90
18 2 „ 18 4	157		27 4 „ 27 8		45
20 22 „ 21 0	135		27 8 „ 27 10		67
21 2 „ 21 4	56		30 8 „ 30 12	90	
21 12 „ 21 22	67		30 14 „ 31 6	67	
23 8 „ 23 20		45	Sums	898	752

The following is an abstract of the results, the negative sign denoting retrograde motion:—

	°		°
January	866	July	−46
February	233	August	1159
March	45	September	−258
April	425	October	−337
May	1087	November	−584
June	317	December	146

And, for the year, there is an excess of direct motion amounting to 3053°, or rather more than 8 revolutions and a half.

TABLE XVI.

Relations of Pressure, Temperature, &c., under different Winds.

NORTH.

Mean Day.	Mean Barom.	Mean Temperature.	Mean Evaporation.	Elastic Force of Vapour.	Reduction to Annual Pressure.	Mean Annual Pressure of Dry Air.	Reduction to Annual Temperature.	Mean Annual Temperature.	Number of Obs. and Sum.
1864.	Inches.	°	°	Inches.	Inches.	Inches.	°	°	
Jan. 6	30·085	26·6	26·4	—0·133	—0·096	29·856	+12·4	39·0	8
Feb. 17	29·757	31·4	30·7	—0·160	—0·078	29·519	+ 9·6	41·0	12
Mar. 16	29·484	39·2	37·0	—0·197	—0·062	29·225	+ 7·4	46·6	7
April 21	29·956	47·6	45·0	—0·268	—0·043	29·645	— 0·9	46·7	10
May 14	29·721	50·6	47·7	—0·296	—0·005	29·420	— 3·3	47·3	11
June 2	29·630	51·8	48·1	—0·292	+0·088	29·426	— 7·5	44·3	3
July 13	29·898	61·2	56·3	—0·389	+0·126	29·635	—11·7	49·5	11
Aug. 18	29·942	56·9	52·2	—0·333	+0·086	29·695	—11·6	45·3	11
Sept. 29	30·019	51·7	48·1	—0·293	+0·042	29·768	— 4·5	47·2	2
Oct. 17	29·765	49·3	46·8	—0·290	+0·027	29·502	— 1·2	48·1	12
Nov. 8	29·925	38·6	36·8	—0·200	—0·008	29·717	+ 4·7	43·3	8
Dec. 21	29·917	32.5	32·0	—0·175	—0·071	29·671	+ 9·5	42·0	8
Means	29·842	44·8	42·3	—0·252	0·000	29·590	+ 0·2	45·0	Sum = 103

NORTH-EAST.

Mean Day.	Mean Barom.	Mean Temperature.	Mean Evaporation.	Elastic Force of Vapour.	Reduction to Annual Pressure.	Mean Annual Pressure of Dry Air.	Reduction to Annual Temperature.	Mean Annual Temperature.	Number of Obs. and Sum.
1864.	Inches.	°	°	Inches.	Inches.	Inches.	°	°	
Jan. 3	30·288	26·3	26·0	—0·133	—0·096	30·059	+11·9	38·2	4
Feb. 22	29·835	31·8	31·0	—0·159	—0·078	29·598	+ 9·1	40·9	7
Mar. 13	29·428	39·8	37·6	—0·202	—0·062	29·164	+ 7·4	47·2	7
April 22	29·980	50·3	46·5	—0·273	—0·043	29·664	+ 0·9	51·2	3
May 17	29·823	53·6	50·4	—0·323	—0·005	29·495	— 4·2	49·4	5
June 2	29·634	54·4	49·4	—0·294	+0·088	29·428	— 7·5	46·9	1
July ...	......	...	...	......	......	......	......	...	...
Aug. 18	30·026	58·5	53·5	—0·349	+0·086	29·763	—11·6	46·9	5
Sept. ...	......	...	...	......	......	......	......	...	...
Oct. 17	29·658	51·8	49·0	—0·313	+0·027	29·372	— 1·2	50·6	4
Nov. 23	29·218	40·5	39·4	—0·229	—0·008	28·981	+ 7·3	47·8	1
Dec. 23	30·235	31·4	31·2	—0·168	—0·071	29·996	+10·1	41·5	2
Means	29·812	43·8	41·4	—0·244	—0·016	29·552	+ 2·2	46·0	Sum = 39

TABLE XVI (*continued*).

Relations of Pressure, Temperature, &c., under different Winds.

EAST.

Mean Day.	Mean Barom.	Mean Temperature.	Mean Evaporation.	Elastic Force of Vapour.	Reduction to Annual Pressure.	Mean Annual Pressure of Dry Air.	Reduction to Annual Temperature.	Mean Annual Temperature.	Number of Obs. and Sum.
1864.	Inches.	°	°	Inches.	Inches.	Inches.	°	°	
Jan. 17	29·985	36·9	34·2	— 0·169	— 0·096	29·720	+ 11·2	48·1	4
Feb. 27	29·483	39·4	39·2	— 0·237	— 0·078	29·168	+ 8·8	48·2	1
Mar. 10	29·533	40·8	40·2	— 0·241	— 0·062	29·230	+ 8·0	48·8	7
April 16	29·851	45·0	42·4	— 0·241	— 0·043	29·567	+ 2·3	47·3	3
May 21	29·964	58·8	55·4	— 0·394	— 0·005	29·565	— 5·0	53·8	5
June ...	......	...	...	......	......	......	......	...	...
July ...	......	...	...	......	......	......	......	...	...
Aug. ...	......	...	...	......	......	......	......	...	...
Sept. ...	......	...	...	......	......	......	......	...	...
Oct. 21	29·060	52·0	49·9	— 0·333	+ 0·027	28·754	+ 0·2	52·2	1
Nov. 14	29·438	45·0	43·4	— 0·262	— 0·008	29·168	+ 5·8	50·8	3
Dec. 15	29·647	40·3	39·7	— 0·238	— 0·071	29·338	+ 8·5	48·8	5
Means	29·620	44·8	43·0	— 0·264	— 0·042	29·314	+ 5·0	49·8	Sum = 29

SOUTH-EAST.

Mean Day.	Mean Barom.	Mean Temperature.	Mean Evaporation.	Elastic Force of Vapour.	Reduction to Annual Pressure.	Mean Annual Pressure of Dry Air.	Reduction to Annual Temperature.	Mean Annual Temperature.	Number of Obs. and Sum.
1864.	Inches.	°	°	Inches.	Inches.	Inches.	°	°	
Jan. 19	29·965	38·0	37·0	— 0·208	— 0·096	29·661	+ 11·2	49·2	10
Feb. 28	29·472	41·5	40·7	— 0·245	— 0·078	29·149	+ 9·1	50·6	3
Mar. 7	29·451	41·7	40·0	— 0·225	— 0·062	29·164	+ 8·0	49·7	4
April 15	29·939	49·5	45·6	— 0·263	— 0·043	29·633	+ 3·5	53·0	7
May 9	29·822	55·9	51·6	— 0·332	— 0·005	29·485	— 2·6	53·3	3
June 12	29·468	56·8	52·6	— 0·345	+ 0·088	29·211	— 9·6	47·2	4
July 27	29·669	65·5	56·9	— 0·359	+ 0·126	29·436	— 12·4	53·1	1
Aug. 27	30·024	58·7	53·4	— 0·369	+ 0·086	29·741	— 9·9	48·8	1
Sept. 24	29·841	57·3	54·9	— 0·400	+ 0·042	29·483	— 5·3	52·0	2
Oct. 20	29·183	49·9	47·0	— 0·287	+ 0·027	28·923	+ 0·2	50·1	6
Nov. 19	29·261	46·2	44·4	— 0·272	— 0·008	28·981	+ 6·6	52·8	8
Dec. 9	29·647	44·1	43·0	— 0·264	— 0·071	29·312	+ 7·9	52·0	10
Means	29·645	50·4	47·3	— 0·297	0·000	29·348	+ 0·6	51·0	Sum = 59

TABLE XVI (*continued*).

Relations of Pressure, Temperature, &c., under different Winds.

SOUTH.

Mean Day.	Mean Barom.	Mean Temperature.	Mean Evaporation.	Elastic Force of Vapour.	Reduction to Annual Pressure.	Mean Annual Pressure of Dry Air.	Reduction to Annual Temperature.	Mean Annual Temperature.	Number of Obs. and Sum.
1864.	Inches.	°	°	Inches.	Inches.	Inches.	°	°	
Jan. 25	29·938	43·1	41·9	−0·252	−0·096	29·590	+ 10·4	53·5	10
Feb. 10	29·723	46·0	44·0	−0·265	−0·078	29·380	+ 9·7	55·7	7
Mar. 15	29·370	45·1	42·8	−0·248	−0·062	29·060	+ 7·4	52·5	4
April 6	29·713	45·1	42·6	−0·244	−0·043	29·426	+ 4·1	49·2	4
May 17	29·751	56·1	52·6	−0·354	−0·005	29·392	− 4·2	51·9	4
June 14	29·739	58·3	54·1	−0·366	+0·088	29·461	− 9·6	48·7	18
July 21	29·748	62·5	57·6	−0·410	+0·126	29·464	− 12·3	50·2	10
Aug. 15	29·778	62·0	57·4	−0·410	+0·086	29·454	− 11·6	50·4	8
Sept. 11	29·650	58·8	56·0	−0·410	+0·042	29·282	− 7·8	51·0	15
Oct. 19	29·206	52·5	49·0	−0·304	+0·027	28·929	+ 0·2	52·7	4
Nov. 22	29·463	43·3	41·3	−0·231	−0·008	29·224	+ 7·3	50·6	13
Dec. 10	29·937	44·0	42·6	−0·257	−0·071	29·609	+ 7·9	51·9	9
Means	29·668	51·4	48·5	−0·313	+0·001	29·356	+ 0·1	51·5	Sum = 106

SOUTH-WEST.

Mean Day.	Mean Barom.	Mean Temperature.	Mean Evaporation.	Elastic Force of Vapour.	Reduction to Annual Pressure.	Mean Annual Pressure of Dry Air.	Reduction to Annual Temperature.	Mean Annual Temperature.	Number of Obs. and Sum.
1864.	Inches.	°	°	Inches.	Inches.	Inches.	°	°	
Jan. 21	29·929	42·3	40·7	−0·236	−0·096	29·597	+ 10·4	52·7	4
Feb. 11	29·651	43·6	41·8	−0·244	−0·078	29·329	+ 9·7	53·3	5
Mar. 21	29·630	43·9	41·0	−0·225	−0·062	29·343	+ 6·9	50·8	7
April 8	29·783	45·7	42·8	−0·243	−0·043	29·497	+ 4·1	49·8	4
May 10	29·794	59·1	55·4	−0·384	−0·005	29·405	− 2·6	56·5	6
June 18	29·807	58·1	54·2	−0·371	+0·088	29·524	− 10·4	47·7	15
July 15	29·708	60·6	55·6	−0·378	+0·126	29·456	− 12·0	48·6	8
Aug. 16	29·927	60·9	56·4	−0·395	+0·086	29·618	− 11·6	49·3	12
Sept. 13	29·623	55·5	52·7	−0·362	+0·042	29·303	− 7·0	48·5	13
Oct. 27	29·202	53·6	53·0	−0·394	+0·027	28·835	+ 1·3	54·9	1
Nov. 20	29·564	40·0	38·4	−0·215	−0·008	29·341	+ 6·6	46·6	4
Dec. 19	30·116	37·3	36·7	−0·213	−0·071	29·832	+ 9·5	46·8	3
Means	29·728	50·1	47·4	−0·305	0·000	29·423	+ 0·4	50·5	Sum = 82

TABLE XVI (*concluded*).

Relations of Pressure, Temperature, &c., under different Winds.

WEST.

Mean Day.	Mean Barom.	Mean Temperature.	Mean Evaporation.	Elastic Force of Vapour.	Reduction to Annual Pressure.	Mean Annual Pressure of Dry Air.	Reduction to Annual Temperature.	Mean Annual Temperature.	Number of Obs. and Sum.
1864.	Inches.	°	°	Inches.	Inches.	Inches.	°	°	
Jan. 23	29·767	42·6	40·9	—0·236	—0·096	29·435	+10·4	53·0	1
Feb. 10	29·677	33·2	31·7	—0·159	—0·078	29·440	+ 9·9	43·1	3
Mar. 21	29·309	38·6	36·4	—0·192	—0·062	29·055	+ 6·9	45·5	3
April 16	29·754	48·2	44·7	—0·255	—0·043	29·456	+ 2·3	50·5	5
May 24	29·835	56·4	51·1	—0·314	—0·005	29·516	— 5·0	51·4	5
June 28	29·850	56·4	50·6	—0·303	+0·088	29·635	—10·9	45·5	3
July 13	29·807	60·1	54·2	—0·348	+0·126	29·585	—11·7	48·4	4
Aug. 15	29·849	56·6	52·0	—0·332	+0·086	29·603	—11·6	45·0	7
Sept. 14	29·524	54·5	51·7	—0·346	+0·042	29·220	— 7·0	47·5	4
Oct. 13	29·983	50·5	47·3	—0·287	+0·027	29·723	— 1·2	49·3	4
Nov. 15	29·223	42·6	41·9	—0·258	—0·008	28·957	+ 5·8	48·4	1
Dec. 29	29·902	35·0	34·2	—0·188	—0·071	29·643	+10·8	45·8	2
Means	29·707	47·9	44·7	—0·268	0·000	29·439	— 0·1	47·8	Sum = 42

NORTH-WEST.

Mean Day.	Mean Barom.	Mean Temperature.	Mean Evaporation.	Elastic Force of Vapour.	Reduction to Annual Pressure.	Mean Annual Pressure of Dry Air.	Reduction to Annual Temperature.	Mean Annual Temperature.	Number of Obs. and Sum.
1864.	Inches.	°	°	Inches.	Inches.	Inches.	°	°	
Jan. 28	29·948	42·3	39·4	—0·211	—0·096	29·641	+10·0	52·3	1
Feb. 8	29·739	31·1	30·2	—0·152	—0·078	29·509	+ 9·8	40·9	8
Mar. 23	29·400	38·3	36·2	—0·192	—0·062	29·146	+ 6·3	44·6	3
April 25	29·854	46·1	43·3	—0·249	—0·043	29·562	+ 0·9	47·0	3
May 20	29·768	51·0	47·2	—0·281	—0·005	29·482	— 4·2	46·8	7
June 26	29·827	55·5	50·5	—0·309	+0·088	29·606	—10·9	44·6	1
July 9	29·925	56·5	53·6	—0·374	+0·126	29·677	—11·4	45·1	6
Aug. 19	29·932	55·4	51·6	—0·336	+0·086	29·682	—10·7	44·7	7
Sept. 29	29·988	55·5	51·8	—0·340	+0·042	29·690	— 4·5	51·0	2
Oct. 11	30·052	49·1	45·7	—0·269	+0·027	29·810	— 2·2	46·9	4
Nov. 7	29·881	38·7	37·1	—0·208	—0·008	29·665	+ 4·7	43·4	7
Dec. 21	29·873	31·3	30·7	—0·160	—0·071	29·642	+ 9·5	40·8	3
Means	29·849	45·9	43·1	—0·257	+0·001	29·593	— 0·2	45·7	Sum = 52

TABLE XVII.

Amount of Rain collected on the Ground, and at Elevations of 22 Feet, 24 Feet, and 112 Feet, in the Year 1864.

Month.	Monthly Amount collected.				Ratios; the Rain on the Ground being 1·000.		
	On the Ground.	At an elevation of 22 Feet.	At an elevation of 24 Feet.	At an elevation of 112 Feet.	At 22 Feet.	At 24 Feet.	At 112 Feet.
1864.	in.	in.	in.	in.			
January	0·972	0·889	0·908	0·573	0·915	0·934	0·589
February	1·441	1·258	1·169	0·837	0·873	0·811	0·581
March	2·470	1·907	1·678	1·124	0·771	0·679	0·454
April	1·633	1·337	1·231	0·990	0·819	0·754	0·606
May	2·147	1·958	1·718	1·456	0·904	0·800	0·678
June............	1·009	1·017	0·838	0·789	1·008	0·831	0·782
July	0·470	0·461	0·351	0·234	0·981	0·747	0·498
August.........	0·786	0·778	0·641	0·587	0·990	0·816	0·747
September ...	2·937	2·713	2·599	1·936	0·924	0·885	0·660
October	1·559	} 3·620	1·183	0·964	} 0·932	0·759	0·618
November ...	2·324		2·007	1·173		0·863	0·505
December ...	0·507	0·450	0·524	0·319	0·885	1·036	0·629
Sum or Mean	18·255	16·388	14·847	10·982	0·898	0·813	0·602

TABLE XVIII.

Fall of Rain at the Surface of the Ground, distributed under different Winds, for every Month of the Year 1864.

Month.	N		NE		E		SE		S		SW		W		NW	
	Fall.	Number of Days.	Fall.	Number of Days.	Fall.	Number of Days.	Fall.	Number of Days.	Fall.	Number of Days.	Fall.	Number of Days.	Fall.	Number of Days.	Fall.	Number of Days.
1864.	in.		in.		in.		in.		in.		in.		in.		in.	
Jan.	0·04	1	0·00	0	0·16	3	0·24	5	0·48	6	0·26	2	0·15	1	0·00	0
Feb.	0·05	3	0·03	2	0·40	1	0·64	3	0·52	3	0·56	4	0·19	1	0·00	0
March	0·31	1	1·06	2	1·16	3	0·06	2	0·11	3	0·15	1	0·44	2	0·23	3
April	0·36	1	0·00	0	0·48	1	0·02	2	0·12	1	0·00	0	0·65	2	0·56	1
May	0·78	5	0·37	2	0·00	0	0·47	2	0·61	3	0·84	4	0·16	1	0·31	2
June	0·00	0	0·00	0	0·00	0	0·14	3	0·71	6	0·32	6	0·00	0	0·00	0
July	0·02	1	0·00	0	0·00	0	0·00	0	0·37	4	0·09	2	0·02	1	0·02	1
Aug.	0·16	3	0·00	0	0·00	0	0·02	1	0·43	5	0·31	4	0·30	3	0·12	3
Sept.	0·00	0	0·00	0	0·00	0	0·03	1	1·98	12	2·51	8	0·12	3	0·00	0
Oct.	0·74	1	0·00	0	0·00	0	0·46	3	0·22	3	0·02	1	0·00	0	0·00	0
Nov.	0·70	1	0·70	1	0·00	0	0·82	6	1·26	8	0·01	1	0·00	0	0·00	0
Dec.	0·01	1	0·00	0	0·14	2	0·49	6	0·02	2	0·00	0	0·00	0	0·00	0
Sums	3·17	18	2·16	7	2·34	10	3·39	34	6·83	56	5·07	33	2·03	14	1·24	10

TABLE XIX.

Indications of Schönbein's Ozonometer during the Year 1864.

Day.	Jan.		Feb.		March.		April.		May.		June.		July.		Aug.		Sept.		Oct.		Nov.		Dec.	
	10^h	22^h	10^h	22^h	10^h	22^h	10^h	22^h	10^h	22^h	10^h	22^h	10^h	22^h	10^h	22^h	10^h	22^h	10^h	22^h	10^h	22^h	10^h	22^h
1	9	7	3	8	0	0	6	7	8	8	6	5	4	4	5	5	6	6	6	8	3	3	0	0
2	2	0	8	9	8	8	3	3	8	...	4	6	9	9	6	5	7	5	5	4	3	0	0	0
3	3	6	9	8	0	0	6	8	4	2	7	4	4	4	5	5	7	...	5	5	0	0	7	7
4	5	7	2	6	0	0	4	9	4	7	4	7	6	7	6	6	7	...	4	5	2	0	6	4
5	2	2	2	8	8	6	8	0	7	7	6	7	4	4	5	5	6	6	5	6	2	2	5	3
6	0	0	6	9	8	8	0	0	7	9	6	5	4	3	4	4	8	7	5	6	4	2	0	0
7	0	0	6	6	7	7	2	0	7	7	5	7	5	4	5	6	7	3	5	7	0	0	0	2
8	0	0	0	0	9	7	0	4	8	9	6	6	6	6	6	6	7	5	4	6	0	0	0	0
9	0	0	0	0	0	4	2	0	9	9	7	8	6	8	6	5	7	4	5	7	8	0	0	0
10	0	0	0	0	2	4	0	0	8	8	6	7	9	9	5	5	4	7	3	3	0	0	0	0
11	0	2	0	4	8	4	7	5	7	8	6	6	8	9	4	6	4	4	3	0	2	0	0	0
12	0	0	0	8	7	7	4	6	6	7	6	6	7	8	6	4	5	3	3	3	...	...	3	0
13	0	5	9	6	8	7	4	6	7	3	5	7	5	7	4	5	6	2	3	3	0	5	0	3
14	2	0	8	5	3	7	6	4	5	5	7	7	5	5	6	5	6	0	2	2	5	0	2	6
15	0	0	2	8	4	4	6	0	6	6	6	6	3	5	7	7	9	7	3	3	0	0	3	7
16	0	0	8	7	2	0	...	...	6	8	5	6	6	3	7	7	5	2	5	5	0	0	3	0
17	2	0	0	0	2	2	4	1	4	5	4	7	5	5	5	5	8	6	5	3	2	8	0	0
18	0	0	8	8	5	0	4	4	5	5	5	7	6	3	5	4	6	6	2	2	4	0	0	0
19	0	2	9	9	2	4	4	4	6	5	6	6	4	3	5	7	2	4	3	4	0	0	2	0
20	3	7	8	9	4	8	6	4	9	8	5	7	5	5	5	4	4	6	4	2	2	0	0	0
21	5	10	2	0	7	4	0	7	5	...	...	8	6	5	5	6	5	4	4	3	0	2	2	8
22	8	10	0	0	7	8	4	3	5	6	7	7	6	...	4	6	4	8	3	5	4	2	6	5
23	2	7	4	8	4	0	4	8	4	6	7	7	5	4	5	4	4	7	4	0	2	0	2	4
24	7	9	9	9	3	0	6	4	5	5	...	7	5	5	4	4	6	4	2	0	1	0	3	5
25	0	0	9	7	3	2	5	4	4	6	6	4	9	...	5	4	5	4	7	8	0	3	3	4
26	2	8	9	8	3	5	6	8	4	4	5	7	3	4	3	3	3	2	8	4	2	4	0	0
27	8	8	0	0	2	5	7	9	3	7	4	4	3	4	4	6	6	4	2	2	2	0	2	0
28	8	8	0	0	9	7	7	7	3	3	5	5	7	5	9	6	3	2	4	8	4	0	0	0
29	0	0	0	0	6	4	4	4	6	5	5	5	3	4	3	4	4	5	8	8	2	2	0	0
30	0	0	...	...	4	2	4	4	7	4	5	5	7	5	7	6	5	3	7	6	4	0	0	0
31	0	0	...	...	6	8	...	...	9	9	...	...	7	6	6	6	...	...	7	3	...	...	4	6

TABLE XX.

Mean Monthly Quantities of Ozone, as determined by Schönbein's Ozonometer, in a period of Ten Years, commencing with 1856.

Year.	Jan.		Feb.		March.		April.		May.		June.		July.		August.		Sept.		Oct.		Nov.		Dec.	
	10^h	22^h	10^h	22^h	10^h	22^h	10^h	22^h	10^h	22^h	10^h	22^h	10^h	22^h	10^h	22^h	10^h	22^h	10^h	22^h	10^h	22^h	10^h	22^h
1856	4·5	2·7	4·7	4·1	6·0	3·7	6·3	4·6	6·6	5·3	5·4	3·9	4·8	4·0	5·2	4·4	5·2	4·0	2·5	2·0	3·6	1·4	4·3	1·9
1857	4·2	3·0	2·2	1·1	3·5	2·7	4·0	3·2	5·4	4·8	5·0	3·5	3·1	2·3	3·3	3·4	2·2	1·8	2·2	1·7	2·1	0·5	1·1	1·6
1858	2·1	2·1	2·6	4·3	3·9	3·9	4·8	5·2	4·1	5·1	0·7	2·9	1·4	3·2	2·8	4·6	2·5	3·5	3·1	4·0	1·1	2·3	1·9	2·3
1859	2·5	3·5	2·6	3·2	2·4	4·3	3·5	3·7	3·6	5·5	1·6	2·2	1·5	2·4	2·5	3·2	1·8	3·3	0·9	1·3	0·9	1·4	1·0	1·0
1860	1·4	1·5	1·8	2·1	3·0	3·0	2·0	3·2	3·4	4·5	...	4·3	1·6	3·3	2·4	3·3	0·9	2·0	0·6	1·5	2·3	3·2	0·0	0·0
1861	0·0	0·0	2·0	2·8	2·4	4·1	2·1	3·7	5·0	7·0	3·2	5·2	2·0	3·3	3·2	4·2	3·5	4·1	2·4	3·3	1·2	2·7	2·3	4·2
1862	2·1	3·3	3·3	5·5	3·8	5·2	5·3	6·1	5·4	6·4	5·5	6·8	3·9	5·5	3·9	5·1	4·4	5·0	4·4	5·2	0·7	1·8	2·6	3·9
1863	3·9	6·3	2·1	4·6	3·0	4·0	5·4	5·8	7·5	7·3	6·9	6·8	5·9	5·7	6·7	6·8	4·6	5·8	3·5	5·2	2·5	2·7	3·5	5·0
1864	2·2	3·2	4·2	5·2	4·5	4·3	4·2	4·2	6·0	6·0	5·6	6·0	5·5	4·7	5·0	5·1	5·4	4·7	4·4	4·2	2·0	1·1	1·7	2·1
1865	1·6	2·3	3·1	3·8	3·7	3·6	5·2	5·3	5·8	6·4	5·8	5·8	6·5	6·3	5·4	5·0	5·3	4·9	3·5	3·2	2·8	3·1	2·4	2·7
Means	2·5	2·8	2·9	3·7	3·6	3·9	4·3	4·5	5·3	5·8	4·4	4·8	3·6	4·1	4·0	4·5	3·6	3·9	2·8	3·2	1·9	2·0	2·1	2·5

The following facts are deducible from the numbers at the foot of the columns :—

1. That the greatest quantity of Ozone generally occurs in the Spring, and the least quantity in Oct. and Nov.
2. That the absolutely greatest quantity occurs in May.
3. That there is in every month less Ozone in the evening than in the morning.

During the whole period of ten years, there is only one instance in the month of May, of a complete absence of Ozone during 24 hours, and this instance occurred in 1859.

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